



Statistics Canada    Statistique Canada

---

# *CANADA*

---

# *YEAR BOOK*

---

# *1985*

---

Canada

THE LIBRARY

The Ontario Institute  
for Studies in Education

Toronto, Canada









---

# *CANADA*

---

# *YEAR BOOK*

---

# *1985*

---

A review of economic, social and political  
developments in Canada

Published by authority  
of the Minister of Supply and Services

009  
DEC 2 1985

© Minister of Supply and Services Canada 1985

Available by mail from  
Publications Sales and Services  
Statistics Canada  
Ottawa, Canada K1A 0T6

Statistics Canada should be credited when  
reproducing or quoting any part of this document

Catalogue No. 11-402E/1985

ISBN 0-660-11801-7

April 1985

72100-501

Price, Canada: \$54.00

Other countries: \$70.00

Payment to be made in Canadian funds or equivalent

Production and typesetting: Publications Division,  
Statistics Canada

Printing: The Bryant Press Limited, Contract  
OKT 8407544

Photos: Canada Mortgage and Housing Corp., External Affairs  
Canada, The Image Bank Canada, National Film Board of Canada,  
VIA Rail Canada Inc.

## PREFACE

---

The *Canada Year Book 1985* is the latest edition in a series of books which began eighty years ago to record developments in the economic, social and political life of Canada. Before the "new" series began in 1905, other official summary publications were issued, going back to the *Year-Book and Almanac of British North America 1867*.

Like its predecessors, the *Canada Year Book 1985* brings together a wealth of information to present a composite picture of Canada in a single volume. It is designed to serve as a convenient reference work and as a guide to other sources. It is widely used by librarians, parliamentarians, teachers, diplomats, journalists and many others.

The *Canada Year Book 1985* has been thoroughly revised, with the statistical tables streamlined to provide continuity of coverage from the 1980-81 edition. It also includes such milestones as the "patriation" of the constitution with the entrenchment of the Canadian Charter of Rights and Freedoms, and results of the latest federal general election as well as a summary of events reflecting trends of the Canadian economy in the early 1980s.

With content drawn from a broad spectrum of sources, it is impossible to acknowledge personally the many individuals who contributed to this edition. But it would be unthinkable not to mention our gratitude to them and, above all, to the public for responding to the surveys that are the foundation of Canada's statistical system.

Martin B. Wilk  
Chief Statistician of Canada  
Ottawa

April 1985

---

*Canada Year Book* is planned and edited in the  
Communications Division, Statistics Canada.  
Director: Tim Davis

Chief, Compendia unit: Cécile Dumas

Editor: Borgny Pearson

French editor: Alice Guay

Assistant editors: Margaret Smith, Wendy Havard Wong

Design: Rachel Penkar

Chart preparation: Roger Gervais


Tables and index: Patricia Harris

Production and typesetting: Audrey Miles, Gaétane Rousseau,  
Carol Misener, Heather Sorfleet,  
Diane Desnoyers, Hélène Laplante,  
Monique Légaré.

## CONTENTS

---

Chapter		Page
1	Physical setting	1
2	Demography	33
3	Health	81
4	Education	121
5	Employment and incomes	153
6	Social security	197
7	Housing and construction	227
8	Forests, fish and furs	259
9	Agriculture	287
10	Mines and minerals	331
11	Energy	359
12	Science and technology	387
13	Transportation	405
14	Communications	439
15	Cultural activities and leisure	465
16	Manufacturing	499
17	Merchandising and services	529
18	Banking, finance and insurance	559
19	Government	599
20	Judicial system	637
21	External relations, trade and defence	665
22	Government finance	707
23	Review of the economy	737
Appendix		
1	Government organizations and related agencies	759
2	Federal legislation	787
3	Economic chronology June 1980 - May 1984	795
4	Canadian honours	805
5	Diplomatic and consular representation	817
6	Books about Canada	823
7	Canada Year Book special articles	843
8	Political update	847
9	Commissions of inquiry	859
10	Constitution	861
	Index	869



Digitized by the Internet Archive  
in 2023 with funding from  
University of Toronto

<https://archive.org/details/39250917020063>

# METRIC CONVERSION

---

In view of the degree of metric conversion in Canada almost all quantities in this edition of the *Canada Year Book* appear only in SI metric or in neutral units such as dollars or dozens.

Following are conversion factors for units used in the present edition and some others in common use. Conversions are from SI metric to traditional units. The same number of significant digits is used in these conversion factors as in the *Canadian Metric Practice Guide*. If users do not need this level of accuracy, they can round off figures at any number of digits, either in the calculations or in the results. It is a requirement in SI metric to use spaces instead of commas to separate groups of three digits; a space is optional with a four-digit number. Although this practice is not imperative with neutral units, it is taking place in many cases now and will undoubtedly come about generally through standardization. In all Statistics Canada publications, a period is used as a decimal marker.

## Relative weights and measures: SI Metric, Canadian Imperial and United States units

### Area

1 km <sup>2</sup> (square kilometre)	=	0.3861022 square miles
1 ha (hectare)	=	2.471054 acres
	=	10 000 m <sup>2</sup>
100 ha	=	1 km <sup>2</sup>

### Length

1 m (metre)	=	39.37 inches
	=	3.281 feet
	=	1.094 yards
1 km (kilometre)	=	0.6213712 statute miles = 3,280.840 feet
	=	0.5399568 nautical miles = 3,282.937 feet

### Volume and capacity

1 dm <sup>3</sup> (cubic decimetre)	=	0.0353147 cubic feet
	=	0.4237760 board feet (for lumber)
	=	0.0274962 bushels (for grain)
	=	1 L (litre) (for liquids or, in some cases, for fine solids which pour)
	=	0.2199693 Canadian gallons
	=	35.1951 fluid ounces
	=	0.8798774 quarts
	=	1.75975 pints
	=	0.264172 US gallons
	=	1.05669 US quarts
	=	2.11338 US pints
1 imperial proof gallon	=	1.36 US proof gallons
1 m <sup>3</sup> (cubic metre)	=	6.289811 barrels (petroleum or other liquid)
	=	0.3531466 register tons (in shipping)*
	=	35.31466 cubic feet
	=	1 000 dm <sup>3</sup>

---

**Mass (weight)**

1 g (gram)	= 0.03527396 ounces (avoirdupois)
	= 0.03215075 ounces (troy or apothecary)
1 kg (kilogram)	= 2.20462262 pounds (avoirdupois)
1 t (metric tonne)	= 1.10231131 tons (short)
	= 0.98420653 tons (long)

(For register ton, see Volume and capacity above and footnote\*)

**Length and mass**

1 t.km (tonne kilometre)	= 0.6849446 short ton miles
--------------------------	-----------------------------

**Volume and mass**

1 m<sup>3</sup> of water weighs 1 tonne

**Temperature**

Fahrenheit temperature = 1.8 (Celsius temperature) +32

Celsius temperature = 5/9 (Fahrenheit temperature -32)

At sea level water freezes at 0°C (32°F) and boils at 100°C (212°F)

The following weights and measures are used in connection with the principal field crops and fruits:

Crops	Pounds per bushel	Kilograms per bushel	Bushels per 1 000 kg (1 t)
Wheat, potatoes and peas	60	27.215 5	36.7437
Wheat flour	43.48	19.721 4	50.7063
Oats	34	15.422 1	64.8418
Barley and buckwheat	48	21.772 4	45.9296
Rye, flaxseed and corn	56	25.401 2	39.3682
Mixed grains	45	20.411 7	48.9916
Rapeseed, mustard seed, pears, plums, cherries, peaches and apricots	50	22.679 6	44.0925
Sunflower seed	24	10.886 2	91.8593
Apples	42	19.050 9	52.4910

Strawberries and raspberries 1 kg = 1.47 quarts in BC

= 1.76 quarts in all other provinces

To produce 100 kg of flour it takes 138 kg of wheat.

\*Gross register tonnage of a ship, as used by Lloyd's Register of Shipping, is a measurement of the total capacity of the ship and is not a measure of weight. Net register tonnage equals gross register tonnage minus space used for accommodation, machinery, engine area and fuel storage, and so states the cargo carrying ability of the ship.

CHAPTER 1

---

# PHYSICAL SETTING



## HIGHLIGHTS

---

Canada, the largest country in the Western Hemisphere, has an area of nearly 10 million square kilometres spanning six time zones. Worldwide it is second to the USSR, but bigger than China, the United States or Brazil. Offshore areas include continental margins of about 6.5 million square kilometres.

Canada's territory is diverse, its climate varied. It is washed on three sides by major oceans, the Pacific, Arctic and Atlantic, while Hudson Bay and Hudson Strait bite deeply into the continent. The international border between Canada and the United States, including Alaska, is 8 900 km long, with 3 900 km lying along or across water bodies.

Geological studies indicate how, over 3.8 billion years, molten rocks rose from great depths, volcanoes erupted and sediments accumulated. New mountain ranges arose, older mountains were eroded. Shallow seas encroached repeatedly on the continent. Glaciers accumulated and receded. Valuable minerals and fossil fuels became concentrated under favourable circumstances.

## CHAPTER 1

---

# PHYSICAL SETTING

<b>1.1</b>	<b>Structure and development</b>	<b>5</b>
1.1.1	Dimensions	5
1.1.2	Regional geography	5
1.1.3	Economic geography	9
1.1.4	Settlement	9
<b>1.2</b>	<b>Physical features</b>	<b>10</b>
1.2.1	Mountains	10
1.2.2	Inland waters	10
1.2.3	Coastal waters	12
1.2.4	Islands	13
1.2.5	Surveying and mapping	13
<b>1.3</b>	<b>Geology</b>	<b>13</b>
1.3.1	Geological time scale	15
1.3.2	Geological provinces	15
1.3.3	Origin of leading minerals	16
<b>1.4</b>	<b>Climate</b>	<b>16</b>
<b>1.5</b>	<b>Time zones</b>	<b>17</b>
<b>1.6</b>	<b>Land use</b>	<b>18</b>
<b>1.7</b>	<b>Heritage resources</b>	<b>18</b>
1.7.1	Federal parks	18
1.7.2	Heritage Canada Foundation	19
1.7.3	Provincial parks	19
1.7.4	The national capital region	20
<b>1.8</b>	<b>Environment</b>	<b>20</b>
1.8.1	Environmental quality	20
1.8.2	Environmental review	21

## TABLES

1.1	Land and freshwater areas	23
1.2	Mountains and other heights	23
1.3, 1.4	Dimensions of freshwater lakes	24
1.5	Rivers and their tributaries	25
1.6, 1.7	Major coastlines and islands	26
1.8	Temperatures and precipitation	27
1.9	National parks	28
1.10	Provincial parks	30

## MAPS AND CHART

Map 1.1	Political evolution of Canada	7
Map 1.2	Drainage basins	11
Chart 1.3	Geological time chart	14
Map 1.4	Geological provinces	15
Map 1.5	Standard time zones	17

## CHAPTER 1

# PHYSICAL SETTING

### 1.1 Structure and development

The bedrock foundation of Canada and its submarine continental shelves seem rigid and unchanging to most human eyes, yet to a geologist these rocks and their mineral wealth record the evolution of a continent begun more than 4,000 million years ago. Geological study has shown that at various periods and in various regions molten rocks rose from great depths, volcanoes erupted on the ancient land and seafloors, and thick sequences of sediments accumulated. Granites were either intruded as molten magma or derived from earlier rocks during intense folding and mountain building. Erosion wore down or subdued the older mountain chains. Shallow seas repeatedly encroached on the continent of today and continental glaciers accumulated and receded. As part of these geological processes, valuable minerals and fossil fuels became concentrated under exceptionally favourable conditions. These interrelated processes produced the buried crust and present face of Canada. They control the distribution of its economic mineral deposits, its physiography and, in large part, its present and potential land use.

#### 1.1.1 Dimensions

Canada is the largest country in the Western Hemisphere and second largest in the world. Its territory is diverse, ranging from wide fertile prairies and farmlands, great areas of mountains, rocks and lakes to northern wilderness and Arctic tundra. The greatest north-south distance is from Cape Columbia on Ellesmere Island to Middle Island in Lake Erie, 4 634 km. The greatest east-west distance is from Cape Spear, Nfld. to the Yukon-Alaska border, 5 514 km.

Although the area is recorded as 9 970 610 km<sup>2</sup>, for land and freshwater, Canada also encompasses the Canadian continental margin. The offshore areas of the margin, including Hudson Bay, cover over 6.5 million square kilometres, an area equivalent to over 60% of Canada's total onshore area.

#### 1.1.2 Regional geography

Politically, Canada is divided into 10 provinces and two territories. Each province administers its own natural resources. The resources (except for game) of Yukon and Northwest Territories are administered by the federal government, because of the extent and

remoteness of the territories and their sparse population. Land and freshwater areas of the provinces and territories are given in Table 1.1. Throughout the *Canada Year Book* the provinces are listed from east to west, followed by the territories. Populations quoted in this section are from the 1981 Census, conducted by Statistics Canada.

**Newfoundland** is Canada's most easterly province (population 567,681). The larger part, Labrador, borders the north Atlantic Coast to Hudson Strait and extends inland about 750 km toward its southern end. The surface is mostly a barren mosaic of rocks, swamps and lakes; its rugged coastline has promontories rising directly from the sea. The extreme northern area is dominated by the Torngat Mountains, rising to 1 650 m. Labrador has a rigorous climate and is snow-covered for more than half the year. Many of its river valleys are well forested. Rivers have numerous falls suitable for hydro development such as Churchill Falls. Coastal waters abound in fish. The Precambrian rocks have mineral potential; iron ore is Labrador's greatest source of wealth.

The Island of Newfoundland is also rugged. The Long Range Mountains parallel the western coast and rise to heights of over 800 m. Old, worn-down fold-ridges have axes trending northeast to southwest. Much of the surface is barren and rocky and has innumerable ponds and swamps, the drainage having been deranged in the last glaciation. The moderating influence of the sea is reduced by the cold waters of the Labrador current sweeping along the east and west coasts. Summers are cool and winters relatively mild.

The capital city is St. John's (population 83,700), on the east coast of the Avalon Peninsula. Other urban areas are Corner Brook on the west coast and Grand Falls in the central part of the island, both pulp and paper centres.

**Prince Edward Island.** The smallest province (population 122,506) is cradled in the Gulf of St. Lawrence, east of New Brunswick and north of Nova Scotia and separated from them by the Northumberland Strait. It has no pronounced upland but attains an altitude of about 140 m above sea level. The coast is greatly indented and has many bays and inlets

running inland in every direction. Influenced by the sea, the climate is quite moderate except for occasional extreme lows in winter.

The capital of Prince Edward Island is Charlottetown (population 15,282).

**Nova Scotia** is a peninsular province (population 847,442) almost surrounded by waters of the Bay of Fundy, the Atlantic Ocean, the Gulf of St. Lawrence and Northumberland Strait. It is connected with New Brunswick by the Isthmus of Chignecto. The northeastern portion, Cape Breton Island, is separated from the mainland by the Strait of Canso, now traversed by a permanent causeway. The island is almost bisected from northeast to southwest by the saltwater Bras d'Or Lake; a wooded upland rises in the north. Most of the mainland is of low relief. Summer and winter temperatures are more moderate than in interior continental areas at the same latitude and the seasons are somewhat later. Winters are stormy on the Atlantic Coast and fog is prevalent all year. The Atlantic side is rocky and deeply indented with bays and inlets providing many harbours.

The two large urban areas are Halifax–Dartmouth and Sydney–Glace Bay. Halifax, the capital (population 114,594), is situated on one of the best landlocked harbours in the world.

**New Brunswick** (population 696,403) is nearly rectangular with an extensive seacoast provided by the Chaleur Bay on the north, the Gulf of St. Lawrence and Northumberland Strait on the east, and the Bay of Fundy on the south. It adjoins the United States and Quebec.

The surface is mostly undulating. A northwestern plateau, 300 to 450 m above sea level, is deeply dissected by valleys leading to the Saint John River which flows generally southward across the province. The central highlands consist of a dissected plateau about 610 m above sea level. A maritime plain slopes eastward from the highlands and extends along the coast of New Brunswick from the southern shore of Chaleur Bay. New Brunswick's climate reflects the moderating influence of the sea. Seasons are somewhat delayed and temperatures in the interior are more extreme than on the coasts.

Fredericton (population 42,252) is the capital. Saint John, at the mouth of the Saint John River, is the principal port and industrial centre.

**Quebec**, the largest province in area (population 6,438,403) extends north and west of the St. Lawrence River and Gulf of St. Lawrence to Hudson Strait and Hudson Bay and a line running due south of James Bay; it is bounded on the southwest by the Ottawa River and on the northeast by Labrador. South of the St. Lawrence are the Eastern Townships and the Gaspé Peninsula.

Physiographically, Quebec has three regions. The plateau-like highlands of the Canadian Shield occupy the greater part of the area north of the

St. Lawrence River. Made up of a mass of ancient and mainly hard rocks, they present a rough, broken surface strewn with lakes. The Appalachian Mountains extend through the area south of the St. Lawrence. The St. Lawrence lowlands are low and flat, covered by deep clay deposited when the area was invaded by the Champlain Sea after the melting of Pleistocene ice. In this fertile agricultural area the people for generations gained their livelihood from the land. Although now far outranked by manufacturing as an employer, agriculture is still a fundamental way of life.

In the St. Lawrence valley, the frost-free season extends from early May to late September. Northward and westward, winter temperatures become more extreme and the summers cooler.

Montréal, the largest city, is one of the great industrial, commercial and financial centres of the continent. Québec City, the capital (population 166,474), was founded by Champlain in 1608.

**Ontario** (population 8,625,107) has a freshwater shoreline on the Great Lakes and a northern saltwater shoreline on Hudson Bay and James Bay.

Ontario has two major geological regions, the Canadian Shield and the gentler lowlands of the Great Lakes–St. Lawrence region. The Canadian Shield terrain, a rugged, rocky plateau strewn with lakes and muskeg, is a difficult surface over which ground transportation routes have been constructed with great effort. The height of land lies in a wide crescent north of Lake Superior. A slope descends gently toward James Bay and Hudson Bay to a marginal strip, the Hudson Bay lowlands. This area bears the brunt of severe winter cold waves moving east from the Prairies or south from the Arctic across Hudson Bay. Summers, though warm, are short.

The southern lowlands region, about one-sixth the size of northern Ontario, has such glacial features as rock plains, morainic hills, till plains, clay plains, drumlins and sand plains. The southwestern tip extends farther south than any other part of Canada. Peninsular Ontario has a much milder climate than the northern districts. Since it lies in a major storm track, wide variations occur in weather, especially in winter, but conditions of severe cold or excessive warmth are not prolonged.

This lowlands area is densely populated and highly industrialized. Favourable climate, fertile soil, ease of travel over relatively unobstructed terrain and on the St. Lawrence River and the Great Lakes influenced population growth and agriculture became well established. Early colonial settlements have become highly industrialized and produce almost every product required by consumers. The area is now one of the world's great industrial agglomerations with the provincial capital, Toronto (population 599,217), as its focal point.

**Manitoba** (population 1,026,241) is the most easterly of the three Prairie provinces. It has two

Map 1.1  
Political evolution of Canada



distinct topographic forms, the largest part within the Canadian Shield. The demarcation line begins close to the southeast boundary and runs diagonally northwest through Lake Winnipeg to the Saskatchewan border. The northern area has heavily glaciated topography and deranged drainage. Its major rivers, Nelson and Churchill, flow into Hudson Bay. The southwestern portion is the lowest of three step-like formations across the great central plains. It is floored by deep fertile clay soils left by glacial lakes that once covered the area. It is separated from the Saskatchewan plain along its western boundary by the Manitoba escarpment, a narrow belt of hilly terrain.

Manitoba has the greatest water-power potential of the three Prairie provinces. The north is well forested but much of the productive area is so remote that forest industries are not highly developed.

Winnipeg, the capital (population 562,059), is the industrial centre of Manitoba.

**Saskatchewan** (population 968,313) is two-thirds prairie lowland, the great grain-producing region of Canada. The demarcation line between the lowlands and the Canadian Shield, crossing into Saskatchewan near the 55th parallel, continues northwest across the province although it becomes less sharply defined. The second step of the prairie formation, covered

with deep fertile soil, is exceptionally flat in some areas but elsewhere hummocky with innumerable sloughs. The next scarp is the Missouri Coteau from which extends the highest of the prairie steps. The Cypress Hills rise above this level. Cutting across the lowland are the branches of the Saskatchewan River which flow to Lake Winnipeg.

Saskatchewan's climate is continental with long cold winters and warm summers. The frost-free period in the fertile lowland areas ranges from 80 to 100 days. Precipitation is low with an average of less than 50 cm a year.

The urban centres — Regina, the capital (population 162,613), and Saskatoon (population 154,210) — serve mainly as distributing centres for their surrounding areas.

**Alberta** (population 2,237,724) lies mainly in the interior plains region. The southern part is dry, treeless prairie changing toward the north into a zone of poplar interspersed with open prairie and giving way to mixed forests.

The boundary follows the 49th parallel, strikes northwest following the ridge of the Rocky Mountains to a point close to the 55th parallel and then turns directly north to the 60th parallel. From the Saskatchewan border in the southern area the plain rises gradually as it merges into the Rocky Mountain

**Foothills.** This foothills area is part of the Western Cordilleran region. The Alberta Rockies have numerous high peaks close to or on the British Columbia boundary.

The south is subject in winter to cold dry air masses of continental polar air, occasionally moderated by Chinook winds. Summers are warm with abundant sunshine but rainfall is meagre and highly variable, particularly in the southwest, with periodic droughts. In some areas irrigation projects have been developed, taking water from the rivers rising in the mountains to the west.

The metropolitan areas of Edmonton, the capital (population 532,246), and Calgary (population 592,743) are in the oil and gas producing areas.

**British Columbia** (population 2,744,467) consists almost completely of Cordilleran mountains made up of three parallel ranges with a set of parallel linear valleys.

The Rocky Mountains on the east present a continuous range of wall-like ridges, cut up by glaciation into sharp peaks, knife-like edges and deep hollows. Some of the highest peaks in the Canadian Rockies rise to 3 500 m or more.

The central section is marked off by the Rocky Mountain Trench which contains the headwaters of the Kootenay, Columbia, Fraser, Peace and Liard rivers. Westward, relief is lower and broader and the effects of glaciation are not as spectacular. This section consists of several mountain ranges, with plateaus and lake basins between them.

In the western section the Coast Mountains extend southward from the St. Elias Mountains where the loftiest peaks on the continent thrust up out of glistening icefields.

The inner passage adjacent to the coast — the Strait of Georgia, Queen Charlotte Strait and Hecate Strait — is one of the finest natural waterways in the world. Vancouver Island rises steeply from a rocky coastline; in the Queen Charlotte Islands, individual mountain ranges are separated by deep, narrow valleys.

Prevailing westerly winds and the warm Pacific waters result in mild wet winters in the coastal area, warm summers and the longest average frost-free season in Canada. Inland, there are greater ranges of temperature and much less rainfall. Semi-arid conditions occur in some of the plateau areas of the interior. The north has long cold winters, short cool summers and moderate precipitation.

Vancouver (population 414,281) is the largest city, a rapidly growing industrial complex and seaport. Victoria, the capital (population 64,379), is on the southern tip of Vancouver Island.

**Yukon** (population 23,153), north and slightly west of British Columbia, is a triangular area of plateaus and mountain ranges bounded by Northwest Territories and Alaska. Its only seacoast extends along the Arctic Ocean west of the Mackenzie

River delta. Between the Coast Mountains on the west and the Mackenzie Mountains on the east lies a plateau of rough, irregularly rolling upland. Numerous river valleys cut through mountains and plateaus. In the southwest many peaks of the St. Elias Mountains reach heights of over 4 000 m.

The whole region is north of latitude 60° and part is beyond the Arctic Circle. In summer long hours of daylight promote rapid growth where there is suitable soil. In winter the days are short with little effective sunshine. Despite wide variations in temperature, winters are remarkably mild for the latitude and periods of intense cold are of short duration.

The Alaska Highway provides a transport link with British Columbia and Alberta. The capital and main urban centre is Whitehorse (population 14,814).

**Northwest Territories** (population 45,741) includes all Canadian territory north of the 60th parallel of latitude except Yukon, the northwestern tip of Quebec and Labrador, and all islands south of the 60th parallel in Hudson Bay and James Bay. This vast area, more than one-third of Canada, is one of extremes in topographical characteristics, flora and fauna, and climate with permafrost throughout. East of the mountain fringe along the Yukon boundary, the mainland plains slope east to Hudson Bay and northeast to the Arctic Archipelago. The interior plains of the central continent extend to the Arctic Ocean. Across the low-lying mainland area flows the Mackenzie River, draining Great Slave Lake and Great Bear Lake and emptying into the Arctic Ocean, a distance of about 4 240 km. The whole northeastern portion of the mainland is treeless tundra studded with countless lakes, swamps and muskeg. In southern areas summers last for about three months with temperatures above 10°C. North of the treeline, freezing temperatures may occur during any month and winters are long and bitterly cold. In the archipelago, high mountain ranges lie in a general north-south direction across Baffin, Devon and Ellesmere islands. Climates are moderated by the sea so that extremes are not as severe as in a continental area of the same latitude. Temperatures are generally below -18°C for six months or more. Occasional mild periods occur during the winter, particularly in the western Arctic. Summers are short and cool. Winter nights and summer days are long, reaching a maximum of 24 hours. Precipitation is extremely light and falls mostly in late summer.

The capital, Yellowknife (population 9,483) is situated on the north shore of Great Slave Lake. Road access to the rest of Canada is restricted to the Mackenzie Delta and Great Slave Lake areas. In the eastern Arctic, the focal point is Frobisher Bay.

### 1.1.3 Economic geography

**Newfoundland.** The economy is based largely on natural resources and their processing. Pulp and paper and food processing are the main elements of manufacturing. Iron ore is the largest component of the substantial mineral production with zinc and asbestos having some importance. Cod forms half the value of landed species in the extensive fishing industry.

**Prince Edward Island.** Agriculture is the principal occupation. Almost 70% of the land is cultivated, producing mixed grain crops but specializing in potato growing. Dairying and livestock raising are also important. The lobster catch accounts for about 70% by value of primary fishery production. Food processing makes up the bulk of manufacturing.

**Nova Scotia.** The fishery is one of Canada's largest; principal species by landed value are scallop, cod, lobster and haddock. Agriculture is centred on dairy products, livestock and fruit. Coal is the principal mineral produced although resources include gypsum and salt. Manufacturing is varied and includes food processing, forest products and transportation equipment.

**New Brunswick.** Forest products and food processing are the principal types of manufacturing. Food processing centres on the provincial fishery; the most important species are lobster and herring. Agriculture is mixed, with dairy products and potatoes being the most important single products. In mineral production lead, zinc and byproduct metals form most of the value produced.

**Quebec** accounts for about one-quarter of Canadian manufacturing. Leading are textile and clothing industries, followed by food processing, pulp and paper, primary metals, chemicals, metal fabricating, the wood industries and transportation equipment. Quebec is a major producer of iron ore, gold and copper, and a leading world producer of asbestos. Agriculture is concentrated on livestock and livestock products, mainly hogs, poultry, cattle and dairy products. There is a sea fishery with cod being the principal species. Quebec is a major producer of hydroelectric power, some of it for export.

**Ontario** accounts for about half of Canadian manufacturing. The largest single sector is transportation equipment. Others include food processing, primary metals, metal fabricating, electrical products, chemicals, pulp and paper, and printing. Ontario ranks first among the provinces in agricultural receipts, second in mineral production by value, and third in lumber production. It is the largest producer of metals including nickel, copper, uranium, precious metals and iron ore. In farming, livestock and livestock products predominate, notably cattle, dairy products, hogs and poultry. Leading cash crops are tobacco and vegetables. There is a freshwater fishery in the Great Lakes.

**Manitoba.** The economy has been built on agricultural resources, mainly wheat and other grain crops but mixed farming is more prevalent than in the other Prairie provinces, with emphasis on cattle and hogs. Manufacturing is varied, led by food processing and metal fabricating. Mining is based on metals, especially nickel and copper. Freshwater fishing is also found.

**Saskatchewan.** Agriculture is the leading industry with grains making up virtually all of the crop production. In the somewhat smaller livestock sector cattle predominate. Food processing leads in manufacturing. Mineral production is divided among non-metals (Saskatchewan is a major world producer of potash), fuels, and a smaller metals sector based largely on uranium.

**Alberta.** About half the value of minerals produced in Canada comes from Alberta, almost entirely related to fuels — petroleum, natural gas and its byproducts, including sulphur, and coal. Agricultural receipts come almost evenly from grains and livestock, mostly cattle. Food processing is the largest manufacturing activity.

**British Columbia.** Natural resources are the basis of the economy. The forest industry makes up half the manufacturing value with lumber being more important than pulp and paper. Other manufacturing includes food processing and metals. In mineral production, copper, molybdenum and precious metals are the principal products. In fuels production, coal is most important. Salmon makes up about half the landed value of an extensive fishery with herring also substantial. Dairy products and cattle are the main form of agriculture, followed by vegetables and nursery crops. The Okanagan Valley is famous for fruit and the interior plateau for beef cattle.

**Yukon.** Mining is a leading activity with lead-zinc and precious metals making up most of the production.

**Northwest Territories.** This large area is considered to have great mineral potential. Zinc makes up more than half the production, followed by lead, gold and some oil and gas production. Fur and fisheries resources, the mainstay of the native population, are exploited commercially to some extent.

### 1.1.4 Settlement

There is no permanent settlement in approximately 89% of Canada. Only the smallest province, Prince Edward Island, is completely occupied. Large parts of the interior of Nova Scotia, New Brunswick and the Gaspé Peninsula are vacant. Around the coast of Newfoundland and on the shores of the St. Lawrence River below Québec City there are only narrow bands of settlement.

About 58% of Canada's population lives between the American border and a 1 046 km east-west line from Québec City to Sault Ste Marie, Ont. In this area, the cities of Montréal, Toronto, Hamilton,

Ottawa, London, Windsor, Québec City and Kitchener account for more than one-third of the population.

The largest tract of continuous settlement is in Manitoba, Saskatchewan and Alberta, north of the United States border. This block occupies about 6.2% of Canada's area and contains five major cities, Edmonton, Calgary, Winnipeg, Saskatoon and Regina. North of this mainly agricultural block, astride the Alberta-British Columbia border, is the Peace River district, an agricultural area which reaches the 57th parallel.

The southern half of British Columbia is settled in interconnecting strips following mountain valleys and coastal plains. BC's population is most dense, however, in the lower mainland, principally in the Vancouver area.

North of the areas already described are a number of remote settlements, the largest being in Ontario and Quebec between the 47th and 50th parallels. Outside these urban-rural blocks are numerous settlements related to mining, forest industries, transportation, administration, defence, hunting and fishing but with little or no agriculture.

## 1.2 Physical features

### 1.2.1 Mountains

The great Cordilleran mountain system is Canada's most impressive physical feature. Many peaks in the various ranges of the Canadian Cordillera are over 4 500 m (metres) high and approximately 1 502 km<sup>2</sup> of territory lie above the 3 048 m mark. Mount Logan, 5 951 m above sea level, in the St. Elias Mountains of Yukon is the highest point in Canada.

Rossland, BC, is the highest city in Canada (1 056 m) and Lake Louise, Alta., is the highest hamlet (1 540 m). Chilco Lake in British Columbia, with an area of 194 km<sup>2</sup>, is the highest major lake (1 171 m). Heights of the more important Canadian mountains and other elevations are given in Table 1.2.

### 1.2.2 Inland waters

Abundant water supplies have been essential to the development of Canada's fisheries and wildlife resources, hydroelectric power, agriculture, recreational activities, transportation, domestic water supply and industrial production.

Each year more than 7 250 000 million tonnes of water fall on Canada as rain and snow. Much of it evaporates, some is stored in lakes, ground water reservoirs and glaciers, and a larger amount runs off in rivers or streams to the oceans. The Atlantic and Pacific coastal regions experience the highest precipitation (100-140 cm), followed by Ontario and Quebec (65-90 cm) and the semi-arid Prairie region (40-55 cm). Canada's northland receives the lowest precipitation (15-40 cm).

About 30% of the mean annual precipitation occurs as snow, and much of it remains stored in its natural form for several months until spring. Then flooding may occur, when river levels rise, and the melting snow cannot be carried off rapidly enough.

Despite abundant water in southern Canada, certain areas, particularly the Prairies, are inadequately supplied. This is due in part to sparse rainfall and also because almost half of Canada's water flows northward through undeveloped areas, largely unused.

About 7.6% of Canada's total area is covered by lakes and rivers, making surface water the most important source of freshwater for water users throughout Canada (Table 1.1). Lakes are natural regulators of river flow; they smooth out peak flows during flooding and sustain stream flow during dry seasons. Among the largest freshwater bodies in the world are the Great Lakes with an area of almost 246 000 km<sup>2</sup>; 36% is in Canada and 64% in the United States (Table 1.3). These lakes are sufficiently large to have measurable, although slight, tides. Other large lakes in Canada are Great Bear Lake, Great Slave Lake and Lake Winnipeg. Countless smaller lakes are scattered throughout the country, particularly in the Canadian Shield. It has been estimated that over 30,000 lakes greater than 3 km<sup>2</sup> exist in Canada. The size and elevation of lakes that are more than 600 km<sup>2</sup> in area are listed in Table 1.4.

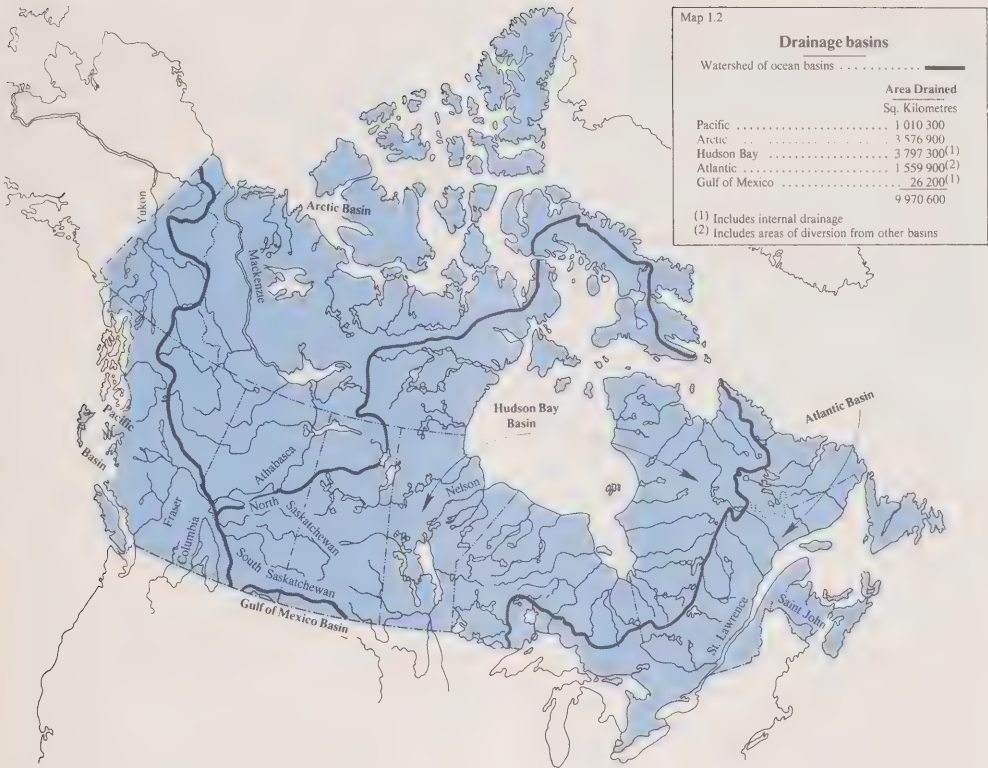
Groundwater as a source of freshwater for communities, industries and irrigators contributes about 10% of the water supplied by municipal water systems. In some areas, particularly the Prairies, groundwater is the principal source of water for streams during extended dry weather periods.

The volume of water stored as snow and ice in North America's glaciers is many times greater than all the lakes, rivers and reservoirs. Most of this is permanently frozen in polar ice caps which have a strong indirect influence on the hydrologic cycle through their effect on weather patterns. In temperate regions, alpine glaciers exert a direct influence on the hydrologic cycle as water from melting glaciers frequently sustains stream flow during dry seasons. In hot summer months, glaciers may contribute up to 25% of the flow of the Saskatchewan and Athabasca rivers. About 75% of glaciated areas of Canada are in the Arctic islands and 25% on the mainland.

In Canada 90% of water used comes from streams and other surface sources such as lakes and man-made reservoirs. The combined mean annual flow of all streams has been estimated at 105 million cubic decimetres per second, equivalent to about 60% of Canada's mean annual precipitation. Table 1.5 lists principal rivers.

Water problems associated with storage, distribution, and water quality are of major concern since they have a direct bearing on Canada's quality of life and economic growth.

The international boundary between Canada and the United States, including Alaska, is 8 900 km



long, of which 3 900 km lie along or across water bodies. Boundary basins are of economic importance to both countries. Natural resources of these basins and transportation and hydroelectric power resources of their waterways have helped to concentrate population growth and industrial development in Canada along a broad band bordering the 49th parallel.

**The Atlantic drainage basin** is dominated by the Great Lakes–St. Lawrence system which forms a navigable inland waterway through a region rich in natural and industrial resources. Its length from the head of Lake Superior to Belle Isle at the entrance of the Gulf of St. Lawrence is 3 700 km. Most of the entire drainage area north of the St. Lawrence and the Great Lakes is occupied by the southern fringe of the Canadian Shield, a rugged, rocky plateau drained by many tributaries. These rivers and the St. Lawrence provide much of the hydro power for the area’s industries. In the St. Lawrence lowlands, smaller rivers are important locally. The Saint John River drains a fertile agricultural area and provides most of New Brunswick’s hydro power.

**The Hudson Bay drainage basin** is the largest in Canada and its main river is the Nelson. The Winnipeg River, a tributary of the Nelson via Lake Winnipeg, is completely developed for hydroelectric

power but development of the Nelson itself is just beginning. The Saskatchewan River, another major tributary to the Nelson via Lake Winnipeg, drains the agricultural region of the mid-west and is a source for irrigation and hydroelectric power.

**The Arctic drainage basin** is dominated by the Mackenzie, one of the world’s longest rivers. It flows from the head of the Finlay River to the Arctic Ocean and drains an immense area in the three western provinces and northern territories. Except for a 26 km portage in Alberta, barge navigation is possible from Fort McMurray on the Athabasca River to the mouth of the Mackenzie, a distance of 2 700 km.

**The Pacific drainage basin** contains rivers that rise in the mountains of the Cordilleran region and flow to the Pacific Ocean through steep canyons and over innumerable falls and rapids. They provide power for large hydroelectric developments and in season swarm with salmon returning inland to their spawning grounds. The Fraser River rises in the Rocky Mountains and, toward its mouth, flows through a rich agricultural area. The Columbia is an international river which falls 796 m during its course and thus has tremendous power potential. A considerable part of the US potential has been developed. In Canada three large reservoirs were built under the terms of the Columbia River Treaty.

These reservoirs make it possible for British Columbia to develop up to 4 000 MW (megawatts) of hydroelectric generating capacity in the Columbia basin. The Yukon River, also an international river and the largest on the Pacific slope remains largely undeveloped.

**Use of inland water.** Over 41.1% of all water withdrawn in Canada (excluding withdrawals associated with hydro projects) is for condenser cooling in steam-electric plants including thermonuclear. About 99% is returned to source. Municipal use, including small industrial processors served by municipal systems, accounts for 9% of current water withdrawals. On average, 75% of the water pumped into municipal water distribution systems is discharged as storm and sanitary sewage containing waste materials. A large and generally unmeasured volume of surface run-off is also discharged from municipal systems.

Other industrial users, manufacturing and mining firms, account for 38% of total withdrawals of water. About 8% of that intake is consumed or lost. Discharged water is frequently returned to source in a highly polluted condition and may be unfit for some uses downstream. Canadian agriculture depends largely upon supplies of water from melting snow and rainfall. In many regions such natural sources are inadequate. Agriculture requires an estimated 8% of the nation's total withdrawals annually for irrigation, stock watering and rural domestic use.

Hydroelectric power generation uses the kinetic energy of falling water to produce electricity. Except for evaporation losses from the surface of reservoirs, the water is not consumed or changed in any way. However, flooding of land for storage and interference with natural flow may have adverse effects.

### 1.2.3 Coastal waters

Canada's coastlines, measuring nearly 244 000 km on the mainland and offshore islands, are collectively among the longest of any country in the world (Table 1.6).

**Atlantic.** Along this coast, over time the sea has inundated valleys, lower parts of the Appalachian Mountains and the Canadian Shield. The submerged continental shelf has great width and diversity of relief. From the coast of Nova Scotia its width varies from 60 to 100 nautical miles, from Newfoundland 100 to 280 nautical miles at the entrance of Hudson Strait, and northward it merges with the submerged shelf of the Arctic Ocean. The outer edge varies in depth from 183 to 366 m. The overall gradient of the Atlantic continental shelf is slight but the whole area is studded with shoals, plateaus, banks, ridges and islands. The 73 m line is an average of 12 nautical miles from the Nova Scotia coast and is the danger line for shipping. The whole floor of the marginal sea is traversed by channels and gullies cutting deep

into the shelf. Large areas undergo constant change because of continuous marine deposit of materials eroded by rivers, wave action, wind and ice.

**Hudson Bay and Hudson Strait** bite deeply into the continent. Hudson Bay is a shallow inland sea 822 324 km<sup>2</sup> in area having an average depth of about 128 m; the greatest depth in the centre of the bay is 258 m. Hudson Strait separates Baffin Island from the continental coast and connects Hudson Bay with the Atlantic Ocean. It is 796 km long and from 69 to 222 km wide; its greatest depth of 880 m is close inside the Atlantic entrance. There are great irregularities in the sea floor but few navigational hazards, except in inshore waters.

**Pacific.** The marginal sea of the Pacific differs strikingly from other marine zones of Canada. The hydrography of British Columbia is characterized by bold, abrupt relief — a repetition of the mountain landscape. Numerous inlets penetrate the mountainous coasts for distances of 93 to 139 km. They are usually a nautical mile or two wide with deep canyon-like sides. From the islet-strewn coast, the continental shelf extends from 50 to 100 nautical miles to its limit at depths of about 366 m. The sea floor drops rapidly from the western slopes of Vancouver Island and the Queen Charlotte Islands. These detached land masses are the dominant features of the Pacific marginal sea. Numerous shoals and pinnacle rocks necessitate cautious navigation.

**Arctic.** The submerged plateau extending north of North America is part of the great continental shelf surrounding the Arctic Ocean, on which lie all the Arctic islands of Canada, Greenland, and most of the Arctic islands of Europe and Asia. This shelf north of Siberia is about 500 nautical miles wide; north of North America it surrounds the western islands of the archipelago and extends 50 to 300 nautical miles seaward from the outermost islands.

The floor of the submerged continental margin is nearly flat to gently undulating, with isolated rises and hollows. Most of it slants seaward with an abrupt break at the outer edge to the continental slope. From the Alaskan border eastward to the mouth of the Mackenzie River the shelf is shallow and continuous with the coastal plain on the mainland; its outer edge is at a depth of about 64 m and 40 nautical miles offshore. Near the western edge of the Mackenzie River delta it is indented by the deep Mackenzie Trough, formerly referred to as the Herschel Sea Canyon, whose head comes within 15 nautical miles of the coast. The submerged portion of the Mackenzie Delta forms a great pock-marked undersea plain, most of it less than 55 m deep, up to 75 nautical miles wide and 250 miles long. North and east of it, the continental shelf is more deeply submerged. Most of the well-defined continental shoulder is over 549 m deep, giving way to the smooth continental slope which extends to the abyssal Canada Basin at about 3 658 m. The deeply submerged continental shelf

runs along the entire west coast of the Canadian Arctic Archipelago from Banks Island to Greenland. Major channels between the islands have flat floors at about the same depth as the shelf. A few local irregularities may be the result of glacial action. The only deep indentation is one sinuous canyon that heads off Robeson Channel at the northeastern end, close to Greenland. Submerged sides of the channels of the archipelago, and slopes from the islands' western shores are marked in many places by a series of steps.

#### 1.2.4 Islands

Canada's largest islands are in the North in the Canadian Arctic Archipelago. The northern group extends from the islands in James Bay to Ellesmere Island which reaches 83°07'N.

The largest on the West Coast are Vancouver Island and the Queen Charlotte Islands, but the coastal waters are studded with many small rocky islands. The largest off the East Coast are the Island of Newfoundland, Prince Edward Island, Cape Breton Island, Grand Manan and Campobello islands of New Brunswick and Anticosti Island and the Îles de la Madeleine of Quebec.

Notable islands of the inland waters include Manitoulin Island, in Lake Huron, the so-called Thirty Thousand Islands of Georgian Bay and the Thousand Islands in the outlet from Lake Ontario into the St. Lawrence River.

The areas of principal islands by region are given in Table 1.7.

#### 1.2.5 Surveying and mapping

The surveys and mapping branch of the federal energy, mines and resources department (EMR) is Canada's national mapping agency. The branch provides the precise geodetic survey framework for all federal mapping and produces topographic maps, aeronautical charts, the *National atlas of Canada* and related thematic maps and base maps of various scales for specialized uses to provide geological, aeromagnetic, electoral and land-use information. The mapping of Canada has been completed at the scale of 0.4 cm to 1.0 km (1:250,000). All of the settled areas and many regions of northern development, amounting to slightly more than half of the country, have also been mapped at a larger scale of 2.0 cm to 1.0 km (1:50,000). All major cities and their suburbs are covered in 690 maps at the scale of 4.0 cm to 1.0 km (1:25,000). Photomaps derived from air photographs cover some of the areas mapped at the two largest scales.

A legal surveys division of EMR is responsible for the technical management of legal surveys of land under federal jurisdiction, such as the northern territories, national parks, Indian reserves and offshore areas and for the custody of the related land survey information. The division is implementing a property mapping system which will form the base

for a multipurpose land information system for Indian lands. It executes surveys on behalf of administering departments, collaborates in the demarcation and maintenance of provincial and territorial boundaries and verifies descriptions of electoral districts.

A geographical research division provides geographical information and cartographic advice to other federal programs. This division produces the *Canada gazetteer atlas* and aeronautical charts and related air information required for regulation, safety and development of Canadian civilian and military aviation. A national geographical names data base provides information on the status, origin and location of the names of 350,000 geographical features and places in Canada.

An international boundary commission maintains a well-defined boundary line between Canada and the United States and regulates all works, such as buildings, pipelines and roads crossing or near the line.


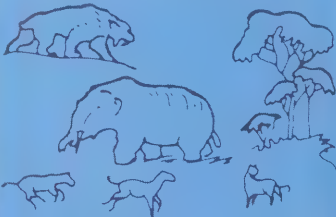
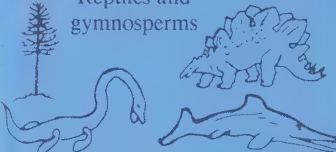




Maps, aeronautical charts and air information publications may be purchased, as well as reproductions of federal aerial photography from a national air photo library and colour transparencies of selected LANDSAT satellite scenes of the landmass.

A permanent committee on geographical names establishes federal policy for the treatment of geographical names. Its secretariat advises on the origin and use of names and geographical terminology. The committee of 20 members, representing both federal and provincial jurisdictions, recognizes the right of each province to make decisions on names in its own area.

### 1.3 Geology

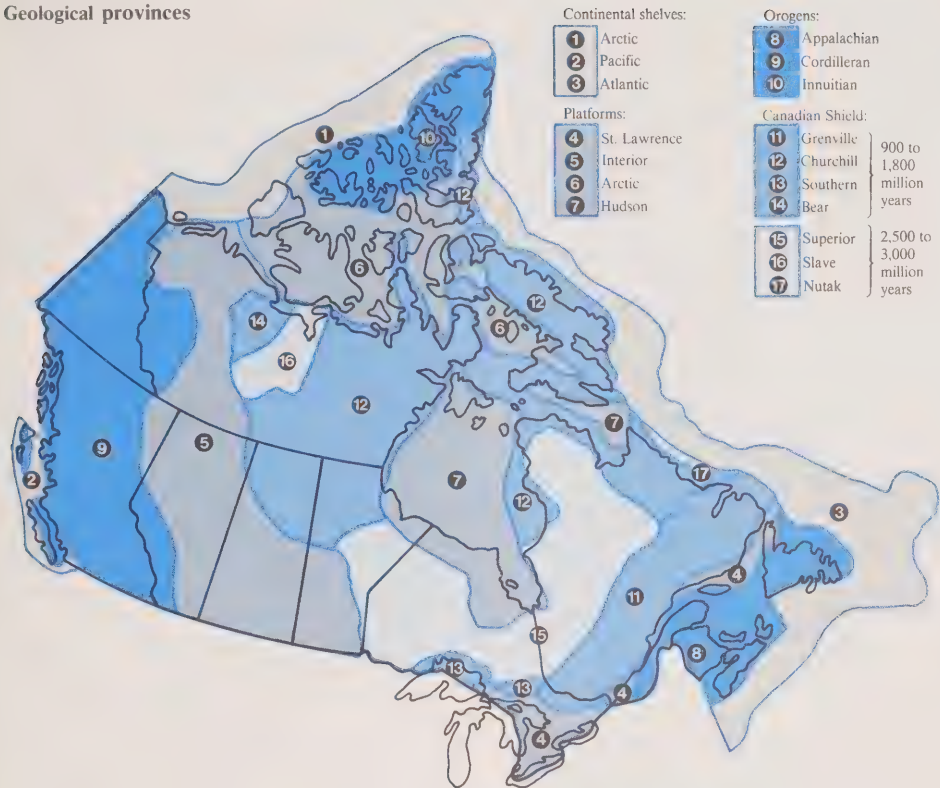
According to global plate tectonics, now generally accepted, the outermost layer or shell of the earth, the crust, is composed of about 15 major plates floating like rafts on a plastic layer or sea of denser rock. The continents are not fixed permanently but move about at rates of a few centimetres a year, sometimes in polar regions, sometimes in equatorial regions. Where plates break and separate, seafloor spreading takes place and magma in the form of red-hot lava comes to the surface along the suture. The greatest mountain system on earth, which lies at the bottom of the sea as mid-ocean ridges extending continuously throughout all the world's oceans, was formed in this way. Submarine vents on seafloor spreading centres belch hot mineral-laden fluids, and have important implications for the origin of mineral deposits. Where plates collide and are consumed by the inner earth, deep ocean trenches, volcanoes and spectacular mountain belts are formed. These discoveries in the earth sciences in the last 20 years have had a dramatic impact on the interpretation and understanding of the geology of Canada.

Chart 1.3  
GEOLOGICAL TIME CHART

EON	ERA	PERIOD		CHARACTERISTIC LIFE
PHANEROZOIC	Cenozoic	Quaternary	Recent	 Man
			Pleistocene 1.8	
		Tertiary	Pliocene	 Mammals and modern plants
			Miocene	
			Oligocene	
			Eocene	
			Paleocene 65	
	Mesozoic	Cretaceous 140		 Reptiles and gymnosperms
		Jurassic 195		
		Triassic 230		
	Paleozoic	Permian 280		 Amphibians and lycopods
		Carboniferous	Pennsylvanian	
			Mississippian 345	 Fishes
		Devonian 395		
		Silurian 435		
		Ordovician 500		
		Cambrian 570		
PRECAMBRIAN	Proterozoic	Hadrynian 1,000		 Primitive invertebrates and algae
		Helikian 1,750		
		Aphebian 2,500		
	Archean			 "Stromatolites
		3,500		

Time millions of years ago

Map 1.4  
Geological provinces



1.3.1 Geological time scale

The age of the earth, which may be at least 4,600 million years old, reveals the immensity of geological time. In Canada the oldest rocks dated by the decay of radioactive elements occur in northern Labrador and are about 3,800 million years old. The geological time chart shows how the major time divisions, known as eons, are divided into eras which, in the Phanerozoic, are subdivided into periods. Fossils, the remains of ancient animals and plants, indicate the characteristic life of past times, and provide the chief means of correlating rocks formed at different periods on different continents. Man's recognizable ancestors are about 5 million years old.

The Phanerozoic (time of obvious life) eon is divided into three eras: The Paleozoic (time of ancient life, chiefly invertebrates), the Mesozoic (time of middle life, chiefly reptiles) and the Cenozoic (time of modern life, dominantly mammals). Time prior to the Paleozoic, known as Precambrian, is made up of two eons, the Archean and Proterozoic, the latter divided into Aphebian, Helikian and Hadrynian eras. The vast span of the Precambrian is not obvious on the geological time chart. It began with the formation of Earth and ended 570 million years ago, thus accounting for seven-eighths of the geological record.

The Precambrian-Cambrian boundary marks the time when there was an explosive evolution in marine life and organisms developed skeletons that could be preserved as fossils in the strata of sedimentary rocks. Although Precambrian fossils are rare, because organisms at those times were soft-bodied and difficult to preserve, there was life long before shelly animals appeared 570 million years ago. Life existed in what is now Canada over 2,500 million years ago and is preserved in Archean carbonates as stromatolites, laminated structures that represent intertidal algal mats containing bacteria.

1.3.2 Geological provinces

Canada is made up of 17 geological provinces which are of four major categories; shield, orogen, platform and shelf.

**The Precambrian Shield** is a vast region covering most of eastern and north-central Canada in a broad band around Hudson Bay. It is composed of seven geological provinces. Three of them, Superior, Slave and Nutak, were deformed during the Archean eon and contain the oldest continental crust known in Canada ranging from 2,500 to over 3,000 million years in age. Churchill, Southern and Bear provinces embrace ancient mountain belts produced 1,750 million years ago during a major Proterozoic orogeny.

A younger Proterozoic orogeny about 1,000 million years ago deformed the Grenville province.

The shield was worn down by erosion in late Precambrian times. The sea encroached during the succeeding Paleozoic and Mesozoic eras and deposited sediments. These were largely stripped off by erosion in Cenozoic time. The shield has a characteristically hummocky surface and is low lying except along its eastern margin in Labrador and Baffin and Ellesmere islands.

**Orogens.** The Appalachian, Cordilleran and Innuitian orogens are mountain belts of deformed and metamorphosed sedimentary and volcanic rocks, mainly of Phanerozoic age, intruded by great masses of granite. Although the orogens mark sites of plate collision, they are of different ages and different complex origins. The Appalachians, for example, were formed by the closure of a Paleozoic ocean basin. The Atlantic continents were in contact 200 million years ago. In Jurassic time the continental plates started to separate to form the present Atlantic Ocean so that a remnant of the Appalachians is now preserved in northwest Europe.

**Platforms.** The St. Lawrence, Interior, Arctic and Hudson platforms are formed of thick, flat-lying Phanerozoic strata which cover large parts of the Canadian Shield. The Interior platform is a vast flatland extending west from the edge of the shield to the foothills of the Rocky Mountains.

**Shelves.** The geologically youngest provinces, the submarine Atlantic, Pacific and Arctic continental shelves, are formed of little deformed sediments chiefly of Mesozoic and Cenozoic age that have accumulated and are still accumulating along the margins of the present continental mass.

### 1.3.3 Origin of leading minerals

Petroleum and natural gas are fluids of organic origin, derived from the remains of marine algae and diatoms, occupying interspaces in rocks chiefly in the Interior platform, foothills of the Cordillera and continental shelves. In Western Canada most production is from Devonian and Mississippian strata, although large reserves of oil occur in the Cretaceous Athabasca oil sands of northeast Alberta.

Copper is associated with nickel or zinc in rich massive deposits in Precambrian volcanic and sedimentary rocks. It also occurs scattered throughout huge Jurassic granite bodies, termed batholiths, in the Cordillera.

The world's largest group of iron ore areas is in the Canadian Shield. These deposits are of Archean age in Superior province and of Aphebian age in northern Labrador and northeast Quebec.

Nickel of Aphebian age occurs in Southern province in the Sudbury basin of northern Ontario. This exceptionally rich mineral deposit resulted from a meteorite impact about 2,000 million years ago.

Potassium chloride, commonly known as potash, is obtained from horizontal layers of Middle Devonian potassium-bearing ores associated with rock salt in Saskatchewan. Present day potash ores form by the evaporation of salt water in isolated basins in the hottest, driest places on the earth.

Half of Canada's coal (bituminous and anthracite) comes from Pennsylvanian rocks in the Appalachians. Coal is produced from compressed decayed vegetation and in the upper Carboniferous the chief coal-makers were tall forest trees and giant 15-metre high reeds. Lignites and brown coals are common in the Cretaceous and Tertiary coalfields of the Cordillera, Interior platform and foothills.

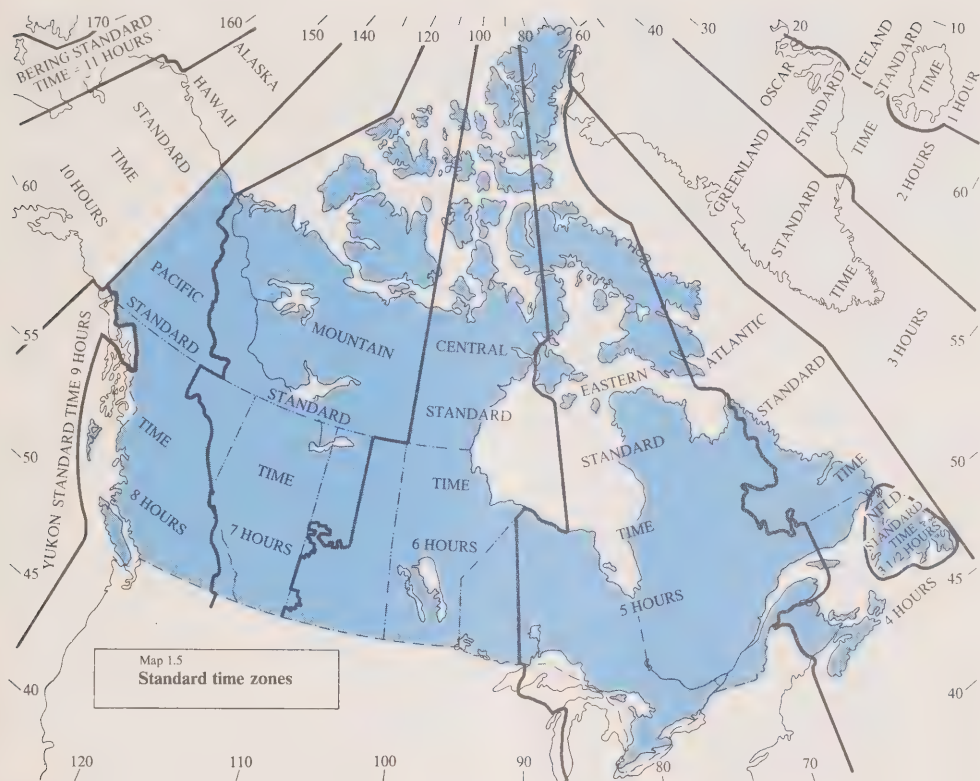
Zinc is commonly associated with lead, copper or silver. It occurs in basement rocks of the Precambrian Shield; in Helikian strata in Baffin Island, British Columbia and Yukon; in Paleozoic rocks in the Appalachians, and in Middle Devonian rocks on the south shore of Great Slave Lake.

Asbestos is the commercial name for a series of fibrous minerals, but in Canada chrysotile is the only variety mined. It occurs chiefly in the Eastern Townships of Quebec, in the Appalachians, as veins in altered Ordovician and Devonian rocks, remnants of ocean floor material emplaced in the mountains during plate collision.

Uranium, recovered from rocks of Precambrian age in the shield, is of complex origin. It is associated with conglomerates that may represent beach or river deposits of early Aphebian age in Southern province, and with Helikian Athabasca sandstones in northern Saskatchewan.

## 1.4 Climate

Climate depends primarily on radiative exchanges between the sun, the atmosphere and the surface of the earth. Regional climates of Canada are controlled by the geography of North America and by the general movement of air from west to east. The Pacific Coast is cool and fairly dry in summer but mild, cloudy and wet in winter. Interior British Columbia has climates varying more with altitude than latitude: wet windward mountain slopes with heavy snows in winter, dry rainshadow valleys, hot in summer, and high plateaus with marked day to night temperature contrasts. Interior Canada, from the Rocky Mountains to the Great Lakes, has a continental-type climate with long cold winters, short but warm summers and scanty precipitation. Southern portions of Ontario and Quebec have a humid climate with cold winters, hot summers and generally ample precipitation all year. The Atlantic provinces have a humid continental-type climate although in the immediate coastal areas there is a marked maritime effect. On the northern islands, along the Arctic Coast and around Hudson Bay, arctic conditions persist, with long frigid winters and only a few months with temperatures averaging



above freezing. Precipitation is light in the tundra area north of the treeline. Between the arctic and southern climates boreal Canada has a transitional type climate with bitter long winters but appreciable summer periods. Precipitation is light in the west, but heavier in the Ungava Peninsula.

**Climatic data.** Some climatic detail of individual provinces and territories is given in Section 1.1.2, Regional geography. Temperature and precipitation data for various districts are shown in Table 1.8. Additional data from hundreds of stations and reports concerning the climates of Canada and the regions are available from the atmospheric environment service of the environment department.

## 1.5 Time zones

Canada has six time zones. The most easterly, Newfoundland standard time, is three hours and 30 minutes behind Universal Time (UT), and the most westerly, Pacific standard time, is eight hours behind UT. From east to west, the remaining zones are called Atlantic, Eastern, Central and Mountain.

Standard Time, adopted at a world conference at Washington, DC in 1884, sets the number of time zones in the world at 24, each zone ideally extending over  $1/24$ th of the surface of the earth and including all the territory between two meridians  $15^\circ$  of longi-

tude apart. In practice, the zone boundaries are quite irregular for geographic and political reasons. UT is the time of the zone centred on the zero meridian through Greenwich, England. Each of the other time zones is a definite number of hours ahead of or behind UT to a total of 12 hours, at which limit the international date-line runs roughly north-south through the mid-Pacific.

**Legal authority for the time zones.** Time in Canada has been of provincial rather than federal jurisdiction. Each of the provinces and territories has enacted laws governing standard time and these laws determine the time zone boundaries. Lines of communication, however, have sometimes caused communities near the boundary of a time zone to adopt the time of the adjacent zone, with amendments to provincial legislation. Official time for federal purposes is the responsibility of the National Research Council of Canada (NRC).

Based on atomic clocks, Canada's time is established by the National Research Council with a precision of one ten-millionth of a second per day, and co-ordination with other countries is maintained to the same precision through the Bureau international de l'Heure in Paris.

**Daylight saving time.** Most provinces have legislated provincial or municipal adoption (or rejection) of

daylight saving time; in the other provinces authority is left to the municipalities. By general agreement, daylight saving time set at one hour earlier than standard time is in force from the last Sunday in April until the last Sunday in October.

## 1.6 Land use

The lands directorate of the environment department (Environment Canada) investigates from a national perspective problems of land use and management. It provides information on land use, socio-economic and environmental concerns relating to the land resource, and means of dealing with these concerns. A federal policy on land use provides guidelines to federal departments and agencies. The directorate undertakes research on the impact of federal policies and programs on land use and prepares publications on resource lands. Studies have investigated agricultural land-use change, mining and the environment, planning land for energy, and the agricultural use of marginal lands. Solutions to land problems have been analyzed with publications on land legislation in Prince Edward Island and the impact of British Columbia's agricultural land reserves.

The directorate operates a Canada land inventory (CLI). Under federal-provincial agreements, all settled lands have been classified according to their capabilities for agriculture, forestry, recreation, wildlife, sport fishing, and land use (circa 1967). These data, used for regional planning, have been entered into a computerized Canada land data system (CLDS). More than 3,000 CLI maps are available, as well as census data, information on federal land holdings, watershed boundaries and ecological land data. For information not covered by the CLI program, an ecological land classification system has been designed. A northern land-use information mapping program has been developed for Yukon and most of Northwest Territories.

A Canada land-use monitoring program (CLUMP) emphasizes urban-centred regions and prime resource lands. The urban-centred component provides a national perspective on land-use change for fringe areas of urban regions with populations over 25,000. The prime resource component monitors land-use changes in the prime agricultural and fruitland areas.

The directorate is developing an ecodistrict data base for all Canada, with emphasis on Northwest Territories where development potential is high but basic land resource data are often lacking or not integrated.

## 1.7 Heritage resources

### 1.7.1 Federal parks

**National parks.** Canada's national parks system, encompassing more than 129 499 km<sup>2</sup>, is the largest in the world, and will observe its centennial in 1985.

In 1885 the Canadian government reserved from private ownership the mineral hot springs of Sulphur Mountain in what is now Banff National Park. Two years later this reserve was extended and named Rocky Mountains Park, the first federal park in Canada.

Two land reserves in southern British Columbia — Yoho and Glacier — were made by the federal government in 1886, a reserve in the Waterton Lakes area of southern Alberta in 1895, and an area around Jasper, Alta., in 1907. These four western mountain reserves and Rocky Mountains Park formed the nucleus of the national park system after the Dominion Forest Reserves and Parks Act was passed in May 1911. A national parks branch was created to protect, administer and develop the parks.

By 1930 there were nine more national parks. Three added in Ontario were St. Lawrence Islands, Point Pelee and Georgian Bay Islands national parks. Prince Albert National Park in Saskatchewan and Riding Mountain National Park in Manitoba were former federal forest reserves. Elk Island National Park near Edmonton was established as a preserve for buffalo and Wood Buffalo National Park, a large area straddling the Alberta–Northwest Territories border, as a refuge for the largest surviving free roaming herd of bison in North America. Two scenic BC areas were preserved — Mount Revelstoke and Kootenay national parks.

Between 1930 and 1969, national parks were established in the four Atlantic provinces: Cape Breton Highlands and Kejimikujik in Nova Scotia; Prince Edward Island National Park in Prince Edward Island; Fundy and Kouchibouguac in New Brunswick; and Terra Nova in Newfoundland. By 1972 eight more were added: two in Quebec; one each in Newfoundland, Ontario, British Columbia and Yukon; and two in Northwest Territories. About 20 million visits a year are now recorded in the national parks. Details of the parks with their description, size and location are given in Table 1.9.

To protect not only unique and outstanding areas of the Canadian land and seascapes but also those representative of its physical, biological, and oceanographic characteristics, 48 distinctive natural regions have been identified by Parks Canada with a view to having national parks eventually in each of these natural regions; 18 regions are now represented. As an example, in 1981 an agreement was signed with the province of Saskatchewan to establish Grasslands National Park, following the expiry of a seven-year exploration program for oil and natural gas.

**National marine parks.** Canada is bounded by three oceans and has the largest volume of fresh water among all countries of the world. Extension of the national parks system to represent the Pacific, Arctic and Atlantic coasts and inland waters, with identification of the marine natural regions and marine natural history themes is an objective.

**National landmarks.** Preservation of specific natural wonders, such as the Nouveau-Québec Crater (sometimes referred to as the Chub Crater) in Northern Quebec, the frozen pingos of the Arctic, semi-desert and eroded hills of the Prairies and mountain caves and seascapes, has been proposed under a program of national landmarks.

**National historic parks and sites.** National historic parks and sites commemorate persons, places and events of major significance in Canada's historical development.

The National Parks Act of 1930 provided that any land may be set apart to commemorate a historic event, or preserve any historic landmark or any object of historic, prehistoric or scientific interest of national importance. The historic sites and monuments board may recommend that sites, buildings and other structures of national importance be developed as national historic parks or historic sites or commemorated by the erection of plaques or distinctive monuments.

The national historic parks and sites branch has been instrumental in creating 80 national historic parks and major sites, over 60 operational, and in commemorating with plaques more than 700 persons and events of national (as opposed to local or regional) significance. Negotiations are conducted with provinces for acquiring other sites. The branch has entered into cost-sharing agreements with provincial and municipal governments and with incorporated non-profit societies for acquiring and restoring architecturally or historically significant buildings and structures on the understanding that the other party will pay the balance of acquisition and restoration costs and will maintain the buildings in perpetuity. In recent years, nearly 5 million visits have been recorded annually at Canada's national historic parks and sites. Details on location and characteristics of national historic parks and sites may be obtained from Parks Canada.

**The Canadian inventory of historic building** is a computerized program to survey, analyze and categorize old buildings. Exteriors of about 200,000 buildings have been surveyed and almost all have been indexed; interiors of approximately 1,800 have been surveyed.

**Agreements for Recreation and Conservation (ARC).** Public agencies, organizations and individuals are actively protecting and preserving heritage resources. To provide Canadians new opportunities to appreciate and understand their natural, cultural and historical heritage, Parks Canada created a co-operative program, agreements for recreation and conservation, which focuses principally on heritage canals and co-operative heritage areas.

Exemplified by the Rideau-Trent-Severn waterway, the contemporary importance of heritage canals as recreational waterways emphasizes not only navi-

gation but also visitor participation. Heritage canals illustrate both historical development and early engineering technology.

**World heritage sites.** Canada is one of 65 nations that have adhered to the UNESCO World Heritage Convention to identify and protect cultural and natural properties throughout the world considered to be of outstanding universal value. Seven Canadian sites are on the world heritage list: L'Anse aux Meadows National Historic Park, Nfld., Dinosaur Provincial Park and Head-Smashed-In Buffalo Jump, Alta., the Burgess shale fossil site in Yoho National Park and Anthony Island Provincial Park, BC, Kluane National Park, Yukon, and Nahanni National Park, NWT.

### 1.7.2 Heritage Canada Foundation

This is a charitable national organization created in 1973 to promote an awareness of the architectural heritage on a nation-wide basis. It received an initial federal capital endowment of \$12 million in 1972; interest on this fund is used to further its work. Additional support is solicited from the private and public sectors.

### 1.7.3 Provincial parks

All provincial governments have established parks within their boundaries. Some are wilderness areas set aside so that portions of the country might be retained in their natural state. Most of them, however, are smaller areas of scenic interest, easily accessible and equipped or slated for future development as recreational parks with camping and picnic facilities. (For details see Table 1.10.)

**Newfoundland.** The first park was established in 1954 in western Newfoundland. Then camping and picnicking areas were developed along the Trans-Canada Highway. Later parks were extended to outlying parts along the coast. The system includes camping parks, day-use parks with facilities for picnics and swimming, natural scenic attractions and reserves for future parks.

**Prince Edward Island.** The provincial park system comprises five classes of parks: nature preserves, natural environment parks, recreation parks, wayside/beach access, and historic parks. The parks enhance the scenic drives which loop coastal areas.

**Nova Scotia.** The provincial parks system started in the late 1950s with roadside sites. This has expanded to overnight campgrounds, day-use picnic and roadside parks, and day-use beach parks. Most of the parks are easily accessible from main highways.

**New Brunswick.** The provincial system includes recreational parks, rest areas, and campground, beach, wildlife and resource parks. Most are in rural areas adjacent to or easily accessible from main roads. Several parks have organized activity, lifeguards and interpretation programs. Two year-round parks are Mactaquac, near Fredericton and Sugarloaf near Campbellton.

**Quebec.** The parks and reserves system administered by the Quebec government comprises parks and wilderness reserves, inns, campgrounds, golf courses, picnic areas, nautical parks and other recreational and tourist sites. Visitors are able to camp, canoe, hike and in winter go cross-country skiing or snowshoeing.

**Ontario.** The provincial system, begun in 1893, has six categories of parks: wilderness, natural environment, recreation, nature reserve, waterway and historical. Examples: Algonquin is a natural environment park with 17 picnic and camping areas and vast canoeing and hiking opportunities; Peterborough Petroglyphs contains one of the largest examples of prehistoric rock carving in Canada.

**Manitoba.** The system includes natural parks, heritage parks, provincial recreation parks, and wayside parks and campgrounds throughout the province. Resource-based parks and related land-use areas are maintained for the enjoyment and recreation of Manitoba citizens and visitors.

**Saskatchewan.** In 1931 Duck Mountain, Cypress Hills and Moose Mountain became the first provincial parks. Now parks and recreation sites represent all ecological segments, classified as wilderness, natural environment or recreation. The social importance of outdoor recreation and heritage appreciation is reflected in regional parks designed for recreational use and historic parks as monuments to early trade, conflict and settlement.

**Alberta** provincial parks, started in 1932, include about 60 provincial parks and wilderness areas: Whitegoat, Siffleur and Ghost River. Other areas have been proposed as ecological reserves or natural areas. Major provincial parks include Kananaskis, Cypress Hills, Dinosaur, Lesser Slave Lake and Writing-on-Stone.

**British Columbia** has the largest number of provincial parks among the provinces. The system began in 1911 with Strathcona Park in central Vancouver Island and has expanded to include wilderness areas, camping and picnicking sites, downhill and cross-country ski areas, a marine park system, historic parks and sites, a canoe circuit, wildlife sanctuaries, and outstanding examples of the province's physical features.

#### 1.7.4 The national capital region

Canada's capital lies on the Ottawa River below the Chaudière Falls and just above the mouths of the Rideau River and Gatineau River. The name Ottawa comes from Outaouac or Outaouais, an Indian tribe from Lake Huron which controlled trade on the river.

Ottawa, Ont. and Hull, Que. comprise the core of the 24-municipality national capital region, an area of about 4 662 km<sup>2</sup> with 2 719.5 km<sup>2</sup> in Ontario and 1 942.5 km<sup>2</sup> in Quebec and a population of about 715,000. Industrial development in the region is

limited. A large proportion of the work force is employed by the federal government.

The National Capital Commission (NCC) prepares plans for and assists in the development, conservation and improvement of the national capital region but does not have jurisdiction over any municipal or regional authorities or the two provincial governments concerned. Most matters affecting planning, zoning, land use, building density, public transit, parking and construction of streets, arterial roads and highways are within municipal jurisdiction, subject only to provincial government approval. In its development efforts the NCC depends essentially upon the co-operation of each municipality and provincial government.

The commission has established seasonal recreation activities with skating on the Rideau Canal, bicycle paths, and events such as Winterlude and outdoor summer entertainment. Nature interpretation programs were inaugurated in Gatineau Park and the greenbelt, a strip of land about 3 km wide designed to prevent haphazard urban sprawl and protect farming and conservation areas.

**Gatineau Park** is a 351 km<sup>2</sup> recreation area north of Ottawa and Hull being developed by the federal government as part of the national capital region under the NCC. It is a wilderness area of great potential extending northward from Hull for 56 km. With 40 km of parkway, magnificent lookouts, lakes, fishing streams, beaches, picnic areas, camping sites, skiing and walking trails, it is enjoyed by about 1.8 million visitors a year. A master plan for further development is now completed and may take 15 to 20 years to implement.

## 1.8 Environment

Environment Canada has a mandate to foster harmony between society and the environment for the economic, social and cultural benefits of present and future generations of Canadians.

### 1.8.1 Environmental quality

In its strategic planning in 1982 the department identified eight priorities for action during the next several years:

**Toxic substances** released into the environment, especially if persistent, can have a cumulative effect on all living things, including humans. The department is undertaking to identify threats as early as feasible. It has proposed that responsibility should be shared among governments and actual or potential polluters, that action should be taken to prevent or mitigate adverse consequences, and that public consultations should be held on the environmental and socio-economic trade-offs in using polluting substances.

**Acid rain** is caused by emissions of sulphur dioxide and nitrogen oxide in Canada and the United States.

The environment department's goal is a reduction of acid deposition in Central and Eastern Canada by 1990 to no more than 20 kilograms per hectare per year to protect moderately sensitive aquatic systems. This would require agreements with the provinces and the United States, and public information and consultation initiatives supported by scientific and technical knowledge.

**Forest sector.** The objective is to ensure long-term economic development of the forest sector in an environmentally sound manner. Environment Canada plans to conduct research and development, to encourage technology transfers and an increased supply of professional manpower from Canada's universities and to promote better forest management by the provinces and industry through regional development and employment creation programs.

**Water resources management** may become as significant an issue by 1990 as energy has been in recent years. Elements of concern include: growing imbalances between water supply and demand especially on the Prairies, inadequate water quality in various parts of the country, pressures for water export to the United States, proposals for major diversions in Canada and conflicts in water use plans among provinces and territories.

**Energy development.** The department proposes to ensure that environmental effects are considered in all energy-related decisions including the development and use of coal resources, frontier oil and gas activities and nuclear energy projects. Energy conservation can contribute to energy self-sufficiency and maintenance of environmental quality. Departmental research will continue into environmentally benign sources of energy including forest biomass.

**Northern development.** The area north of 60 degrees latitude requires special environmental considerations. Proposed developments include a conservation strategy for national parks and wildlife areas, protection of historical and cultural resources, contributions to the environmental assessment of major developments, leadership in the management of larger northern river systems, and participation in land-use planning initiatives.

**Land resources.** Increased demands for renewable resources including forestry and agricultural products make it necessary to maintain land productivity and the related resource base. Issues

are multiple land use, possible degradation of soil quality and loss of wildlife habitat, increasing soil erosion and water supply considerations, and land-use demands from urbanization.

**Climate change.** Carbon dioxide levels in the atmosphere are increasing by 3% per decade from burning fossil fuels, deforestation and other altered land use. This may cause significant warming of the earth surface, altering climates and economies. A warmer climate in Canada would expand growing and ocean transportation seasons in the North. It would increase aridity in southern Canada threatening drought, water shortages, and reduced river and lake levels. Changes elsewhere in the world could alter Canada's international trade position. A Canadian climate program plans to monitor changes in carbon dioxide and climate, predict the effects, prepare related socio-economic impact scenarios, develop adaptive strategies and provide monthly and seasonal climate predictions.

### 1.8.2 Environmental review

A federal environmental assessment review office administers a process which requires consideration of environmental consequences of proposals involving the federal government through funds or property. This includes activities initiated by federal departments and agencies which are all subject to the process. Exceptions are proprietary Crown corporations and regulatory agencies, which are invited to participate. Departments and agencies screen proposed projects for potential adverse effects. If effects are not apparent, a more detailed evaluation is made. At either of these stages, the project may be accepted, modified, or rejected. When the potential environmental effects may be significant, the project is referred to the assessment review office for a formal public review by an independent environmental assessment panel.

The panel issues guidelines for an environmental impact statement. As part of its review, the panel holds public meetings in communities near the proposed project site to hear comments about the proposal. It submits a report to the minister of the environment which describes the major potential impacts and contains recommendations on project implementation. Decisions on the recommendations are made by the minister of the environment and the minister of the initiating or sponsoring department.

### Sources

- 1.1 - 1.1.4 Geological Information Division, Geological Survey of Canada, and Geographical Research Division, Surveys and Mapping Branch, Department of Energy, Mines and Resources.
- 1.2.1 Topographical Survey Division, Surveys and Mapping Branch, Department of Energy, Mines and Resources.
- 1.2.2 Environmental Conservation Service, Department of the Environment.
- 1.2.3 Communications Branch, Department of Fisheries and Oceans.
- 1.2.4 - 1.2.5 Surveys and Mapping Branch, Department of Energy, Mines and Resources.
- 1.3 Geological Information Division, Geological Survey of Canada, Department of Energy, Mines and Resources.
- 1.4 Climatological Applications Branch, Atmospheric Environment Service, Department of the Environment.
- 1.5 Division of Physics, National Research Council.
- 1.6 Environmental Conservation Service, Department of the Environment.
- 1.7.1 Parks Canada Information Division, Department of the Environment.
- 1.7.2 Heritage Canada Foundation.
- 1.7.3 Supplied by the respective provincial government departments.
- 1.7.4 Public Activities Branch, National Capital Commission.
- 1.8 - 1.8.1 Information Services Directorate, Department of the Environment.
- 1.8.2 Federal Environmental Assessment Review Office.

### Selected references

- Canada gazetteer atlas*. Macmillan Company of Canada Ltd., Toronto, in co-operation with Energy, Mines and Resources Canada, Ottawa, 1980.
- Departmental strategic plan*. Environment Canada, Ottawa, 1982.
- Environmental protection service strategic plan*. Environment Canada, Ottawa, 1982.
- Geology and economic minerals of Canada*. Edited by R.J.W. Douglas, economic geology report, no.1, 5th edition, Geological Survey of Canada, Ottawa, 1970.
- Historic guide to Canada's national historic parks*. Parks Canada, Ottawa, 1982.
- Human activity and the environment*. Statistics Canada 11-509E, Ottawa, 1978; second edition in preparation, 1984.
- Map 900A, Principal mineral areas of Canada*. (One copy available free to residents of Canada.) 33rd edition, Geological Survey of Canada, Ottawa, 1983.
- National atlas of Canada*. Macmillan Company of Canada Ltd., Toronto, in association with the Department of Energy, Mines and Resources and Information Canada, Ottawa, 1974.
- National parks, a brief guide*. Parks Canada, Ottawa, 1982.
- Prospecting in Canada*. A.H. Lang, economic geology report no. 7, 4th edition, Geological Survey of Canada, Ottawa, 1970.

TABLES

- ..

not available
- ...

not appropriate or not applicable
- nil or zero
- too small to be expressed
- e

estimate
- p

preliminary
- r

revised
- certain tables may not add due to rounding

1.1 Land and freshwater areas, by province

Province or territory	Land km <sup>2</sup>	Freshwater km <sup>2</sup>	Total km <sup>2</sup>	Percentage of total area
Newfoundland <sup>1</sup>	371 690	34 030	405 720	4.1
Prince Edward Island	5 660	—	5 660	0.1
Nova Scotia	52 840	2 650	55 490	0.6
New Brunswick	72 090	1 350	73 440	0.7
Quebec	1 356 790	183 890	1 540 680	15.5
Ontario	891 190	177 390	1 068 580	10.7
Manitoba <sup>1</sup>	548 360	101 590	649 950	6.5
Saskatchewan <sup>1</sup>	570 700	81 630	652 330	6.5
Alberta	644 390	16 800	661 190	6.6
British Columbia <sup>1</sup>	929 730	18 070	947 800	9.5
Yukon Territory <sup>1</sup>	478 970	4 480	483 450	4.8
Northwest Territories <sup>1</sup>	3 293 020	133 300	3 426 320	34.4
Canada	9 215 430	755 180	9 970 610	100.0

Note: All figures have been rounded to the nearest 10 to reflect their approximate nature.  
<sup>1</sup>Recalculated figures 1981.

1.2 Principal heights in each province and territory, by range or region

Province and height	Elevation m	Province and height	Elevation m
NEWFOUNDLAND		SASKATCHEWAN	
Long Range Mountains		Cypress Hills	1 392
Lewis Hills	814	ALBERTA	
Blue Hills of Couteau		Rocky Mountains	
Peter Snout	495	Mount Columbia	3 747
Central Highlands		The Twins	3 734
Main Topsail	555	Mount Alberta	3 619
Tornгат Mountains		Mount Assiniboine	3 618
Unnamed peak (58°53' 63°43')	1 652	Mount Forbes	3 612
Kaumajet Mountains		Mount Temple	3 544
Bishops Mitre	1 113	Mount Lyell	3 520
Finger Hill	1 033	Hungabee Mountain	3 520
PRINCE EDWARD ISLAND		Snow Dome	3 520
Highest point on the Island, Queens County (46°20' 63°27')	142	Mount Kitchener	3 505
NOVA SCOTIA		BRITISH COLUMBIA	
Highest point, Cape Breton (46°42' 60°36')	532	Vancouver Island Ranges	
NEW BRUNSWICK		Golden Hinde	2 200
Mount Carleton	820	Coast Mountains	
Wilkinson Mountain	785	Mont Waddington	3 994
QUEBEC		St. Elias Mountains	
Mont d'Iberville (Monts Tornгат)	1 652	Fairweather Mountain	4 663
Les Appalaches		Monashee Mountains	
Mont Jacques-Cartier (Monts Chic-Chocs)	1 268	Mount Begbie	2 732
Mont Albert	1 151	Selkirk Mountains	
Les Laurentides		Mount Sir Sandford	3 522
Mont Tremblant	968	Purcell Mountains	
Collines Montérégiennes		Mount Farnham	3 457
Mont Brome	533	Columbia (Cariboo) Mountains	
ONTARIO		Sir Wilfrid Laurier	3 444
Ishpatina Ridge	693	Rocky Mountains	
Niagara Escarpment		Mount Robson	3 954
Blue Mountains	541	Mount Clemenceau	3 658
MANITOBA		Mount Goodsir	3 581
Baldy Mountain	832	Mount Bryce	3 507
		YUKON	
		St. Elias Mountains	
		Mount Logan	5 951
		Mount St. Elias	5 489
		Mount Lucania	5 226
		King Peak	5 173
		Mount Steele	5 073

## 1.2 Principal heights in each province and territory, by range or region (concluded)

Province and height	Elevation m	Province and height	Elevation m
<b>NORTHWEST TERRITORIES</b>			
Arctic Islands		Barbeau Peak, highest point in Arctic Islands	2 615
Baffin		Victoria	
Penny Ice Cap	2 057	Shaler Mountains	650
Banks		Mainland	
Durham heights	732	Mount Sir James MacBrien	2 760
Devon		Franklin Mountains	
Ice Cap	1 920	Cap Mountain	1 570
Ellesmere		Richardson Mountains	
		Mount Goodenough	980

## 1.3 Elevations, areas and depths of the Great Lakes

Lake	Elevation <sup>1</sup> m	Length km	Breadth km	Maximum depth m	Total area km <sup>2</sup>	Area on Canadian side of boundary km <sup>2</sup>
Superior	183	563	257	405	82 103	28 740
Michigan	176	494	190	281	57 757	36 000
Huron	176	332	295	229	59 570	12 760
Erie	174	388	92	64	25 667	10 040
Ontario	75	311	85	244	19 011	

<sup>1</sup>Long-term mean 1860-1972; International Great Lakes Datum, 1955.

## 1.4 Elevations and areas of principal lakes<sup>1</sup> (exceeding 600 km<sup>2</sup>)

Province and lake	Elevation m	Area km <sup>2</sup>	Province and lake	Elevation m	Area km <sup>2</sup>
<b>NEWFOUNDLAND AND LABRADOR</b>			<b>SASKATCHEWAN (concluded)</b>		
Melville Lake	tidal	3 069	Cree	487	1 430
Ossokmanuan Lake	479	834	Doré	459	640
Smallwood Reservoir	471	6 527	Lac La Ronge	364	1 410
<b>NOVA SCOTIA</b>			Peter Pond	421	770
Bras d'Or	tidal	1 098	Reindeer <sup>2</sup>	337	6 630
<b>QUEBEC</b>			Wollaston	398	2 680
Lac Bienville	427	1 248	<b>ALBERTA</b>		
Réservoir Cabonga	361	679	Lake Claire	213	1 430
Lac Eau Claire	241	1 383	Lesser Slave	577	1 160
Réservoir Gouin	404	1 570	<b>BRITISH COLUMBIA</b>		
Réservoir Manicouagan	360	1 942	Atlin <sup>2</sup>	668	770
Lac Minto	168	761	Williston	664	1 660
Lac Mistassini	372	2 336	<b>NORTHWEST TERRITORIES</b>		
Réservoir Pipmuacan	396	979	Aberdeen	80	1 100
Lac Saint-Jean	98	1 002	Amadjuak	113	3 110
<b>ONTARIO</b>			Aylmer	375	840
Abitibi Lake <sup>2</sup>	265	932	Baker	2	1 880
Big Trout	213	660	Buffalo	265	610
Lake of the Woods <sup>2</sup> (total			Clinton Colden	375	730
4 349) Canadian part 3 149	323	3 149	Contwoyto	445	950
Lake Nipigon	261	4 848	Lac de Gras	416	630
Lake Nipissing	196	831	Dubawnt	236	3 830
Rainy (total 932)			Ennadai	311	680
Canadian part 741	338	741	Eskimo Lakes	2	1 460
Lac Seul	357	1 658	Garry	148	970
Lake Simcoe	219	743	Great Bear	156	31 150
Lake St. Clair	175	694	Great Slave	156	28 570
<b>MANITOBA</b>			Hottah	180	910
Cedar	253	1 352	Kamilukwak	266	630
Cross	207	756	Kaminak	53	600
Gods	178	1 150	Kasba	336	1 340
Island	227	1 222	Lac la Martre	265	1 770
Manitoba	248	4 659	Mackay	431	1 060
Moose	255	1 368	Nettilling	29	5 540
Playgreen	217	658	Nonacho	319	780
Southern Indian	255	2 248	Nueltin <sup>2</sup>	278	2 270
Lake Winnipeg	217	24 390	Point	375	700
Lake Winnipegosis	253	5 374	Selwyn <sup>2</sup>	398	710
<b>SASKATCHEWAN</b>			Napakulik	381	1 080
Lake Athabasca <sup>2</sup>	213	7 936	Tulemalu	279	660
			Wholdaia	364	670
			Yathkyed	141	1 440

Areas are given for mean water levels. All elevations are in metres above mean sea level.

<sup>1</sup>Excludes Great Lakes, see Table 1.3.

<sup>2</sup>Spans provincial or territorial boundary. Listed under province or territory containing larger portion. Area given is total area.

1.5 Lengths of principal rivers and their tributaries<sup>1</sup>

Drainage basin and river	Length km	Drainage basin and river	Length km
FLOWING INTO THE PACIFIC OCEAN		FLOWING INTO HUDSON BAY AND HUDSON STRAIT (concluded)	
Yukon (mouth to head of Nisutlin)	3 185	English	615
(International Boundary to head of Nisutlin)	1 149	Fairford (to head of Manitoba Red Deer)	684
Porcupine	721	Churchill (to head of Churchill Lake)	1 609
Stewart	644	Beaver (to outlet of Beaver Lake) <sup>2</sup>	491
Pelly	608	Severn (to head of Black Birch)	982
Teslin	393	Albany (to head of Cat)	982
Columbia (mouth to head of Columbia Lake)	2 000	Thelon	904
(International Boundary to head of Columbia Lake)	801	Dubawnt	842
Kootenay	781	La Grande-Rivière (Fort George River)	893
Kettle (to head of Holmes Lake) <sup>2</sup>	336	Koksoak (to head of Caniapiscaw)	874
Okanagan (to head of Okanagan Lake) <sup>2</sup>	314	Nottaway (via Bell to head of Mégiscane)	776
Fraser	1 368	Rupert (to head of Témiscamie)	763
Thompson (to head of North Thompson)	489	Eastmain	756
North Thompson	338	Attawapiskat (to head of Bow Lake)	748
South Thompson (to head of Shuswap)	332	Kazan (to head of Ennadai Lake)	732
Nechako (to head of Eutsuk Lake)	462	Grande rivière de la Baleine	724
Stuart (to head of Driftwood) <sup>2</sup>	415	George	563
Skeena	579	Moose (to head of Mattagami)	547
Stikine	539	Abitibi (to head of Louis Lake)	547
Nass	380	Mattagami (to head of Minisinakwa Lake)	443
		Missinaibi	426
FLOWING INTO THE ARCTIC OCEAN		Harricana/Harricanaw	533
		Hayes	483
Mackenzie (to head of Finlay)	4 241	Aux Feuilles	480
Peace (to head of Finlay)	1 923	Winisk	475
Smoky	492	Broadback	451
Athabasca	1 231	A la Baleine	428
Pembina <sup>2</sup>	547	de Povungnituk	389
Liard	1 115	Innuksuac <sup>2</sup>	385
South Nahanni	563	Petite rivière de la Baleine <sup>2</sup>	380
Fort Nelson (to head of Sikanni Chief)	517	Arnaud (Payne)	377
Petitot <sup>2</sup>	404	Nastapoça <sup>2</sup>	360
Hay <sup>2</sup>	702	Kogaluc <sup>2</sup>	304
Peel (mouth of west Channel to head of Ogilvie)	684		
Arctic Red <sup>2</sup>	499	FLOWING INTO THE ATLANTIC OCEAN	
Slave (from Peace River to Great Slave Lake)	415	St. Lawrence River	3 058
Fond du Lac (to outlet of Wollaston Lake)	277	Nipigon (to head of Ombabika)	209
Back (to outlet of Muskox Lake) <sup>2</sup>	974	Spanish <sup>2</sup>	338
Coppermine <sup>2</sup>	845	Trent (to head of Irondale) <sup>2</sup>	402
Anderson <sup>2</sup>	692	Ottawa River	1 271
Horton <sup>2</sup>	618	Gatineau	386
		du Lievre <sup>2</sup>	330
FLOWING INTO HUDSON BAY AND HUDSON STRAIT		Saguenay (to head of Péribonca)	698
		Péribonca	451
Nelson (to head of Bow)	2 575	Mistassini	298
(to outlet of Lake Winnipeg)	644	Chamouchouane	266
Saskatchewan (to head of Bow)	1 939	Saint-Maurice	563
South Saskatchewan (to head of Bow)	1 392	Manicouagan (to head of Mouchalagane)	560
Red Deer <sup>2</sup>	724	aux Outardes	499
Bow <sup>2</sup>	587	Romaine	496
Oldman <sup>2</sup>	362	Bestiamites (to head of Manouanis)	444
North Saskatchewan	1 287	Moisie	410
Battle (to head of Pigeon Lake) <sup>2</sup>	570	St-Augustin	233
Red (to head of Sheyenne)	877	Richelieu (to mouth of Lake Champlain)	171
Assiniboine <sup>2</sup>	1 070	Churchill (to head of Ashuanipi)	856
Winnipeg (to head of Firesteel)	813	Saint John	673
		du Petit-Mécatina	547
		Natashquan	410

<sup>1</sup>Mean annual discharge at mouth of confluence of 280 m<sup>3</sup> and length greater than 100 km.

<sup>2</sup>Mean annual discharge less than 280 m<sup>3</sup> but length greater than 300 km.

## 1.6 Summary of coastlines and islands

Province or region	Mainland measurement km	Major islands			Minor islands		
		Total number	Perimeter length km	Area km <sup>2</sup>	Total number	Perimeter length km	Area km <sup>2</sup>
Queen Elizabeth Islands	—	34	30 483	416 640	2,092	3 779	2 321
Arctic mainland and adjacent islands	19 125	39	34 985	725 749	16,022	22 506	9 018
Northwest Territories (north of Arctic Circle)	5 649	27	21 350	246 154	18,348	24 226	7 788
West Coast (south of Arctic Circle)	7 021	36	10 835	52 909	5,198	7 868	4 789
Manitoba	917	—	—	—	—	—	—
Ontario	1 210	—	—	—	—	—	—
Quebec	10 839	1	554	7 941	2,341	2 380	686
New Brunswick	1 524	2	177	287	230	568	231
Nova Scotia	4 051	2	1 883	10 502	871	1 645	479
Prince Edward Island	—	1	1 107	5 620	31	153	36
Newfoundland	—	5	10 457	109 681	3,056	3 214	1 303
Labrador	8 172	8	1 091	1 684	4,114	6 022	2 295
Total	58 508	155	112 923	1 577 167	52,303	72 361	28 946

Total coastline of Canada 243 791 km.

## 1.7 Areas of major islands, by region

Region and island	Area km <sup>2</sup>	Region and island	Area km <sup>2</sup>
BAFFIN ISLAND	507 451	ARCTIC ISLANDS SOUTH OF QUEEN ELIZABETH ISLANDS (concluded)	
QUEEN ELIZABETH ISLANDS		Air Force	1 720
Ellesmere	196 236	Wales	1 137
Devon	55 247	Rowley	1 090
Axel Heiberg	43 178	HUDSON BAY AND HUDSON STRAIT	
Melville	42 149	Southampton	41 214
Bathurst	16 042	Coats	5 499
Prince Patrick	15 848	Mansel	3 181
Ellef Ringnes	11 295	Akimiski	3 002
Cornwallis	6 996	Flaherty	1 585
Amund Ringnes	5 255	Nottingham	1 373
Mackenzie King	5 048	Resolution	1 015
Borden	2 795	PACIFIC COAST	
Cornwall	2 258	Vancouver	31 284
Eglinton	1 541	Graham	6 361
Graham	1 378	Moresby	2 608
Lougheed	1 308	Princess Royal	2 251
Byam Martin	1 150	Pitt	1 375
Île Vanier	1 127	ATLANTIC COAST	
Cameron	1 059	Newfoundland and Labrador	
ARCTIC ISLANDS SOUTH OF QUEEN ELIZABETH ISLANDS		Newfoundland (main island)	108 860
Victoria	217 290	Gulf of St. Lawrence	
Banks	70 028	Cape Breton	10 311
Prince of Wales	33 338	Anticosti	7 941
Somerset	24 786	Prince Edward	5 657
King William	13 111	Bay of Fundy	
Bylot	11 067	Grand Manan	137
Prince Charles	9 521		
Stefansson	4 463		
Richards	2 165		

1.8 High and low temperatures and precipitation data for typical stations in various districts

District and station	Temperatures (Celsius)						Precipitation		
	Mean Jan.	Mean July	Highest on record	Lowest on record	Av. dates of freezing temperatures (0°C or lower)		Total (all forms) mm	Snowfall cm	Av. number of days (all forms)
					Last in spring	First in autumn			
NEWFOUNDLAND									
Island									
Belle Isle	-9.6	9.4	22.8	-35.0	June 21	Sept. 26	893.1	240.0	149
Gander A	-6.1	16.5	35.6	-27.2	June 4	Oct. 5	1 078.2	354.8	204
Labrador									
Cartwright	-13.1	12.9	36.1	-37.8	June 20	Sept. 9	946.4	433.8	179
Goose A	-16.3	15.8	37.8	-38.9	June 6	Sept. 17	876.8	409.2	176
MARITIME PROVINCES									
Prince Edward Island									
Charlottetown A	-6.7	18.4	34.4	-27.8	May 17	Oct. 15	1 127.8	305.1	169
Nova Scotia									
Annapolis Royal	-3.9	18.3	32.8	-27.2	May 19	Oct. 2	1 204.5	218.2	149
Halifax	-3.2	18.3	34.4	-25.0	May 1	Nov. 1	1 318.8	210.8	152
Sydney A	-4.4	17.9	35.0	-25.0	May 23	Oct. 16	1 340.9	288.0	179
New Brunswick									
Chatham A	-9.3	19.2	37.8	-35.0	May 22	Sept. 21	1 051.2	309.4	152
Grand Falls	-11.9	18.3	36.7	-43.3	May 24	Sept. 21	1 021.6	265.2	105
QUEBEC									
Northern									
Fort Chimo A	-23.4	11.4	32.2	-46.7	June 27	Aug. 30	483.8	236.7	155
Inoucdjouac (Port Harrison)	-24.7	8.9	30.0	-46.1	July 1	Sept. 4	355.6	122.9	133
Schefferville A	-22.7	12.6	31.7	-50.6	June 18	Aug. 31	722.5	335.5	188
Southern									
Bagotville A	-15.7	17.8	35.6	-43.3	May 26	Sept. 18	936.6	341.6	177
Montreal McGill	-8.9	21.6	36.1	-33.9	Apr. 22	Oct. 23	999.0	243.1	164
Quebec A	-11.6	19.2	35.6	-36.1	May 18	Sept. 28	1 088.6	326.6	164
Sherbrooke	-9.6	20.1	36.7	-41.1	May 12	Sept. 27	972.6	244.6	170
ONTARIO									
Northern									
Thunder Bay A	-14.8	17.5	35.6	-41.1	May 31	Sept. 10	738.5	222.0	141
Trout Lake	-24.1	15.9	35.6	-47.8	June 11	Sept. 16	597.3	212.3	158
Southern									
Parry Sound	-9.5	19.3	37.8	-41.1	May 14	Oct. 2	1 020.1	296.7	158
Toronto	-4.4	21.8	40.6	-32.8	Apr. 20	Oct. 30	789.9	141.0	134
PRAIRIE PROVINCES									
Manitoba									
The Pas A	-22.4	17.9	36.7	-49.4	May 28	Sept. 20	449.7	157.2	128
Winnipeg A	-18.3	19.7	40.6	-45.0	May 25	Sept. 21	535.2	131.3	121
Saskatchewan									
Regina A	-17.3	18.9	43.3	-50.0	May 27	Sept. 12	397.9	114.8	114
Saskatoon A	-18.7	18.8	40.0	-47.8	May 27	Sept. 15	352.6	112.5	103
Alberta									
Edmonton Ind. A	-14.7	17.5	34.4	-48.3	May 14	Sept. 19	446.5	132.1	121
Medicine Hat A	-12.1	20.2	42.2	-46.1	May 17	Sept. 20	347.8	121.7	89
BRITISH COLUMBIA									
Pacific Coast and Coastal Valleys									
Prince Rupert	1.8	13.6	32.2	-21.1	Apr. 19	Nov. 5	2 414.5	113.0	227
Victoria									
Gonzale Hts.	4.1	15.7	35.0	-15.6	Feb. 28	Dec. 9	657.1	32.8	142
Southern Interior									
Princeton A	-8.1	17.6	41.7	42.8	June 3	Sept. 12	359.1	157.0	115
Central Interior									
Barkerville	-9.8	12.3	35.6	-46.7	June 29	Aug. 18	1 148.8	581.4	185
McBride	-9.1	15.9	37.8	-45.6	June 9	Sept. 1	524.5	197.4	128
Northern Interior									
Fort Nelson A	-23.2	16.7	36.7	-51.7	May 24	Sept. 5	446.4	191.5	130
Smith River A	-24.5	14.1	33.3	-58.9	June 21	Aug. 11	465.3	211.6	148
YUKON									
Dawson	-28.6	15.5	35.0	-58.3	May 26	Aug. 27	325.5	136.4	120
Snag A	-28.2	13.9	31.7	-62.8	June 18	Aug. 9	359.7	140.5	118
Watson Lake A	-25.3	14.9	33.9	-58.9	May 30	Sept. 3	432.3	227.3	153
Whitehorse A	-18.9	14.1	34.4	-52.2	June 5	Sept. 1	260.3	127.8	118

### 1.8 High and low temperatures and precipitation data for typical stations in various districts (concluded)

District and station	Temperatures (Celsius)						Precipitation		
	Mean Jan.	Mean July	Highest on record	Lowest on record	Av. dates of freezing temperatures (0°C or lower)		Total (all forms) mm	Snowfall cm	Av. number of days (all forms)
					Last in spring	First in autumn			
NORTHWEST TERRITORIES									
Mackenzie Basin									
Fort Good Hope	-31.0	15.9	34.4	-55.6	June 3	Aug. 19	283.7	124.0	101
Fort Simpson A	-27.6	16.1	33.9	-53.3	May 31	Aug. 29	343.2	137.9	126
Hay River A	-25.5	15.6	33.9	-48.3	June 6	Sept. 11	339.8	165.1	109
Barrens									
Baker Lake	-33.6	10.7	27.8	-50.0	June 25	Aug. 31	213.0	88.9	96
Chesterfield	-31.8	8.7	30.0	-51.1	June 29	Sept. 6	363.5	112.8	98
Coppermine	-29.4	9.3	32.2	-50.0	June 27	Aug. 21	216.3	101.9	110
Arctic Archipelago									
Clyde	-26.9	4.6	22.2	-45.6	July 13	July 18	206.3	152.9	94
Eureka	-36.6	5.5	19.4	-53.9	June 27	Aug. 5	58.4	38.4	52
Frobisher Bay A	-26.2	7.9	24.4	-45.6	June 30	Aug. 29	415.2	246.9	135
Mould Bay	-33.8	3.7	15.6	-53.9	July 12	July 19	86.4	59.9	73
Resolute A	-32.6	4.3	18.3	-52.2	July 10	July 20	136.4	78.7	94

A = Airport, Ind. A = Industrial Airport.

### 1.9 National parks by name and year established

Park and year established	Area km <sup>2</sup>	Location	Description
Banff 1885	6 640.8	Western Alberta, on east slope of Rocky Mountains	Scenic mountain area, Banff and Lake Louise resorts. Mineral hot springs. Summer and Winter sports. Commercial accommodation. Campgrounds.
Yoho 1886	1 313.1	Eastern British Columbia, on west slope of Rockies	Mountain peaks, waterfalls and lakes. Yoho and Kicking Horse valleys. Commercial accommodation. Campgrounds.
Glacier 1886	1 349.4	Eastern British Columbia in the Selkirk Mountains	Alpine region, towering peaks, glaciers and forests. Climbing, ski touring, camping.
Waterton Lakes 1895	525.8	Southern Alberta, adjoining Glacier Park in Montana	Mountainous area with peaks and lakes. Commercial accommodation. Campgrounds.
Jasper 1907	10 878.0	Western Alberta, on east slope of Rockies	1 000 km of trails. Icefields, lakes. Mineral hot springs. Summer and winter sports. Commercial accommodation. Campgrounds.
Elk Island 1913	194.3	Central Alberta	Fenced preserve with large herds of buffalo, deer elk and moose. Summer and winter sports. Campgrounds.
Mount Revelstoke 1914	262.6	Eastern British Columbia, on west slope of Selkirks	Mountain-top plateau, alpine meadows and mountain lakes. No campgrounds.
St. Lawrence Islands 1914	4.1	St. Lawrence River between Brockville and Kingston, Ont.	Mainland area and 17 islands among the Thousand Islands. Accessible by boat from mainland points. Campgrounds.
Point Pelee 1918	15.5	On Lake Erie, south-western Ontario	Wildlife. Beaches, marsh area, southern flora, nature trails. Staging ground for migratory birds.
Kootenay 1920	1 377.9	Southeast British Columbia, on west slope of Rockies	Includes section of Banff-Windermere Highway. Broad valleys, deep canyons, mineral hot springs. Commercial accommodation nearby.

## 1.9 National parks by name and year established (concluded)

Park and year established	Area km <sup>2</sup>	Location	Description
Wood Buffalo 1922	44 807.0	Alberta and Northwest Territories	Forests and open plains. Mainly a wildlife sanctuary. Largest herds of free roaming bison in world. Accessible from Fort Smith, NWT. Campgrounds.
Prince Albert 1927	3 874.6	Central Saskatchewan	Forest region. Lakes and streams. Summer and winter recreation. Commercial accommodation. Campgrounds.
Riding Mountain 1929	2 975.9	Southwest Manitoba	Wildlife sanctuary on escarpment. Lakes. Commercial accommodation. Campgrounds. Summer and winter recreation.
Georgian Bay Islands 1929	14.2	In Georgian Bay, near Honey Harbour, Ont.	Accessible by boat. Unusual geological formations on Flowerpot Island. Campgrounds. Picnic areas.
Cape Breton Highlands 1936	950.5	Northern Cape Breton Island, NS	Rugged Atlantic coastline. Fine seascapes. Commercial accommodation. Campgrounds.
Prince Edward Island 1937	18.1	North shore, Prince Edward Island	Tennis, golf, bathing beaches. Commercial accommodation. Campgrounds.
Fundy 1948	205.9	On Bay of Fundy in New Brunswick	Forested region, wildlife, rugged terrain. Commercial accommodation. Campgrounds. Winter and summer recreation.
Terra Nova 1957	396.5	On Bonavista Bay, Nfld. North of St. John's	Maritime area, rocky headlands and forests. Sport fishing. Commercial accommodation. Campgrounds.
Kejimikujik 1968	381.5	South-central Nova Scotia	Inland park. Lakes and rivers. Hiking, canoeing, campgrounds, swimming, interpretation program, picnic areas. Historic Micmac Indian petroglyphs.
Kouchibouguac 1969	225.3	On northern Northumberland Strait in New Brunswick	Maritime park with offshore sandbars. Boating. Fishing in streams, rivers, lakes and ocean. Cross-country skiing. Campgrounds.
Pacific Rim 1970	388.5	West coast of Vancouver Island, BC	Sandy beaches, islands, rain forests, lakes and lifesaving trail. Swimming, fishing and surfing. Campgrounds.
Forillon 1970	240.4	Gaspé Peninsula, Que.	Coastal area with rugged cliffs. Rolling, forested inland areas. Campgrounds.
La Mauricie 1970	543.9	Near Trois-Rivières, Que.	Heavily-wooded section of Laurentian Mountains. Many lakes. Fishing. Campgrounds.
Gros Morne 1970	1 942.5	West coast of Newfoundland	Rugged coastal area. Fjord-like lakes, forests, waterfalls. Fishing. Campgrounds.
Pukaskwa 1971	1 877.8	North shore of Lake Superior near Marathon, Ont.	Part of the Precambrian Shield. Wilderness area, rugged lake shore. Rivers, streams and lakes.
Kluane 1972	22 015.9	West of Whitehorse Yukon	Glaciers and mountains. Mount Logan, Canada's highest peak. Fishing. World heritage site. Campgrounds.
Nahanni 1972	4 765.0	Northwest Territories	Accessible by boat or charter aircraft. Hot springs, canyons, waterfalls, wilderness. World heritage site.
Auyuittuq 1972	21 471.0	Baffin Island	Fjords, mountains, glaciers. Winter and summer activities. Campgrounds.
Grasslands 1981		Saskatchewan	Only protected example of uncultivated short grass prairie, badlands, wildlife. No visitor facilities will be available for several years.

## 1.10 Provincial parks, by province

Province and number of parks	Total area (Developed area) km <sup>2</sup>	Type of park	Accommodation and facilities	Activities	Camping parks, 1982	
					No.	Rates
Newfoundland and Labrador (77)	3 336.9 (335 approx.)	Camping Day-use Natural scenic attractions Reserves	Overnight camping - picnic tables - fireplaces - potable water - pit privies Day-use - picnic tables - fireplaces - beach - boat launch - change houses	Angling Swimming Hiking Canoeing and boating Interpretive programs Snowshoeing Cross-country skiing Camping Photography	42	\$4.00 a night for camping all parks are wilderness
Prince Edward Island (44)	38.96 (21.7)	Nature preserves Sandy beaches Recreation Beach access Historic	Picnic sites Sandy beaches Campgrounds - fresh spring water Serviced tent and trailer sites	Swimming Golf Tennis Interpretive programs Camping Skiing	14	\$7.00-\$9.00 a night no fee for day visits
Nova Scotia (100)	140.0 (65.3)	Campgrounds Picnic Beach Roadside rest sites	Day-use picnic parks Roadside rest sites Day-use beach parks Overnight campgrounds - tables - water - pit privies	Swimming Picnicking Camping	18	\$6.00 seniors - no charge 1 day visit - no charge
New Brunswick (59)	223.7 (31.3)	Recreation Rest areas Campgrounds Beach Resource Wildlife	Lodge Marinas Campgrounds - tables - some form of toilet facility - potable water	Swimming Boating Camping Golfing Interpretive programs with naturalists Tennis Snowshoeing Skiing - cross-country - downhill Skating Tobogganing Sleigh rides		\$5.00-\$7.50 a night
Quebec (91)	92 241	Tourist Wilderness preserves Hunting and fishing preserves Salmon streams Campgrounds Nautical	Cabins Lodges Inns Campgrounds Mooring facilities	Hunting Fishing Hiking Swimming Canoeing Snowshoeing Skiing - cross-country - downhill Camping Mountain climbing Golf Interpretive programs Snowmobiling Picnicking	30	\$6.00-\$11.00 a night
Ontario (131)	52 245 (42 448)	Wilderness Natural environment Waterway Nature reserves Recreation Historical	Picnic and camping areas - beaches - picnic tables - fireplaces - firewood - electricity - tested drinking water - washrooms/ comfort stations - trailer sanitation stations	Museums Outdoor exhibits Nature trails Swimming Canoeing Boating Fishing Hiking Snowmobiling Skiing - cross-country Windsurfing Special events	97	\$6.50-\$8.00 a night

1.10 Provincial parks, by province (concluded)

Province and number of parks	Total area (Developed area) km <sup>2</sup>	Type of park	Accommodation and facilities	Activities	Camping parks, 1982	
					No.	Rates
Manitoba (157)	10 252.32	Natural Heritage Recreational Special use	Hotels Motels Cabins Fishing lodges Campgrounds Space available for building summer homes	Swimming Camping Fishing Hiking Tennis Canoeing Picnicking Boating Snowmobiling Skiing - cross-country - downhill	81	\$5.00-\$8.00 a night
Saskatchewan (155)	5 007	Provincial - wilderness - natural environment - recreational - historic Regional	Campgrounds - picnic and playground areas - electricity - wood - potable water - washrooms - sewage pumpouts - boat and canoe rentals Modern cabins Chalet	Skiing Camping Picnicking Swimming Historic interest sites Snowmobiling Nature trails Arts and crafts Social functions Hunting, fishing boating and sailing Snorkelling Auto touring Horseback riding Tennis Golf Cycling Hiking trails Recreation and waterfront programs	17	\$3.00-\$6.00
Alberta (60)	2 284 (1 204)	Wilderness area Recreation Preservation Natural environment Wildland	Campgrounds Playgrounds Picnic areas Beaches Trails	Camping Picnicking Fishing Hiking Swimming Boating Interpretive programs Skiing - cross-country	60	\$3.00-\$5.00 a night
British Columbia (356)	45 393.2	Wilderness area Recreation Natural Marine Historic Restored gold town	Lodge (Manning Park) Campgrounds Picnic areas Mooring facilities Hiking trails Nature trails Boat ramps Recreation vehicle sani-stations	Boating Camping Picnicking Nature houses Interpretive programs with naturalists Winter sports Skiing Canoeing Mountain climbing Hiking	150	\$4.00-\$10.00 a night

Sources

- 1.1, 1.2, 1.4, 1.7 Surveys and Mapping Branch, Department of Energy, Mines and Resources.
- 1.3, 1.5, 1.8 Communications Branch, Information Directorate, Department of the Environment.
- 1.6 Communications Branch, Department of Fisheries and Oceans.
- 1.9 Parks Canada Information Division, Department of the Environment.
- 1.10 Respective provincial government departments, Tourism Canada, Department of Regional Industrial Expansion.



**CHAPTER 2**

---

**DEMOGRAPHY**



## UPDATE

---

Canada's population was estimated at 25.1 million in April 1984 with 8.8 million people concentrated in Ontario and 6.5 million in Quebec.

The 1981 Census recorded a population of 24.3 million, up 12.9% in a decade. About 76% of the people were urban dwellers and 24% lived in rural areas. Alberta and British Columbia were the provinces with the highest growth rates, primarily because of an economic boom in the West during the 1970s.

Among trends indicated during 1976-81 were: a 40% increase of one-person households to almost one-fifth of all households, a 28% increase in lone-parent families, a 7% decrease in the number of children and a 17.9% increase in the age group of 65 years and older.

Divorces were up 128% in 1981 from 1971, largely because of changes in divorce legislation in 1968. The number of divorces dropped slightly in 1983 to 68,567, down 2.7% from 1982.

## CHAPTER 2

---

# DEMOGRAPHY

<b>2.1</b>	<b>Population growth</b>	<b>37</b>
<b>2.2</b>	<b>Future prospects</b>	<b>37</b>
<b>2.3</b>	<b>Taking the census</b>	<b>37</b>
<b>2.4</b>	<b>Population distribution</b>	<b>38</b>
2.4.1	Population density	39
2.4.2	Urban and rural	39
<b>2.5</b>	<b>Demographic and social characteristics</b>	<b>40</b>
2.5.1	Age, sex and marital status	40
2.5.2	Language	41
2.5.3	Ethnicity, religion, birthplace	41
2.5.4	The native peoples	42
<b>2.6</b>	<b>Households and families</b>	<b>42</b>
2.6.1	Household size and type	43
2.6.2	Family size and composition	43
<b>2.7</b>	<b>The vital components</b>	<b>43</b>
2.7.1	Births	44
2.7.2	Fertility rates	44
2.7.3	Natural increase	44
2.7.4	Deaths	45
2.7.5	Marriages	45
2.7.6	Divorces	45
<b>2.8</b>	<b>Migration</b>	<b>46</b>
2.8.1	Immigration	46
2.8.2	Emigration	48
2.8.3	Internal migration	48
2.8.4	Citizenship	49

## TABLES

2.1	Population summaries	51
2.2, 2.3	Population growth 1851-1981	51
2.4, 2.5	Population change	52
2.6	Population by province	53
2.7-2.10	Cities, towns and metropolitan areas	53
2.11	Population density	55
2.12	Urban and rural population	55
2.13-2.24	Population by various characteristics	56
2.25-2.33	Households and families	62
2.34	Summary of vital statistics	66
2.35, 2.36	Stillbirths and fertility rates	67
2.37-2.39	Marriages	68
2.40-2.44	Divorces	72
2.45-2.50	Immigration	74
2.51	Emigration	76
2.52-2.55	Migrant population	77
2.56	Citizenship	80

## CHARTS

Chart 2.1	Distribution of population by region	39
Chart 2.2	The aging population	41
Chart 2.3	Divorces by rate and dependent children	45
Chart 2.4	Where immigrants came from	47

## CHAPTER 2

# DEMOGRAPHY

### 2.1 Population growth

The most fundamental information about a population is its rate of growth which affects almost every aspect of the national life. Several demographic elements combine to produce this rate: births, deaths, immigration and emigration.

Canada's population was over 24.3 million on June 3, 1981, the date of the 1981 Census. This was an increase of 12.9% over the previous decade, a period of relatively slow growth. The only decade in the current century with a lower rate of growth was from 1931 to 1941, when the population increased by only 10.9%. However, compared to other Western nations, Canada was still experiencing a healthy growth rate. From 1970 to 1980, the United States grew by 11.4%. From 1971 to 1981, Britain grew by only 0.3% and France by 5.3%.

By November 1983 the population of Canada had risen to about 25.0 million, according to Statistics Canada estimates.

### 2.2 Future prospects

The dominant component of population growth in Canada since 1851 has been natural increase (births minus deaths). Although this trend is likely to continue for some time, migration assumed an increasingly important role as the rate of natural increase declined. The birth rate will continue to be a dynamic and crucial factor of growth. Moreover, fluctuations in birth rates can create major economic and social problems. For example, although the post-war baby boom is long past, society is now feeling the impact of this generation on the labour market and other aspects of the national economy. Similarly, problems associated with the sharp drop in the birth rate since 1957 are being felt by school systems as fewer children enter school.

The tempo of future growth depends mainly on whether the total fertility rate, which is now below the replacement level of 2.1 births, will remain constant, fall or rise.

Because of the decline in the number of children in Canada, young adults will not be totally replaced numerically by the next generation unless by increased immigration. These data hold implications for consumer demand in the areas of housing and many other goods and services.

Predictions are subject to error but a period of low fertility is generally seen as the most likely possibility in the immediate future. The birth rate may show some fluctuation, but is not expected to vary a great deal from the replacement level.

Effects related to the bulge in the population caused by the post-war baby boom will continue to dominate Canada's social structure.

Now in their late 20s and 30s, this group will soon constitute a fairly large body of older workers. On retirement, they will necessitate changes in pension systems as the balance between working and non-working populations is altered. Similarly, there may be consequences for health care services, housing and other special requirements of the elderly.

Another dimension of Canada's population structure is the preponderance of women among people 65 years of age and older. This imbalance can be expected to grow in the years to come with the increased aging of the population because the gap between female longevity to 76 years and male longevity to 69 continues to widen. Besides, many elderly women are in the low-income category. There are policy implications both because the numbers are growing significantly and because many elderly women are economically disadvantaged and socially isolated.

The effects of Canada's changing age structure are reflected in much of the 1981 Census data. The decreasing number of children and the increasing number of elderly people, many of whom live alone, have contributed to an overall decline in the average number of persons in each household from 3.5 in 1971 to 2.9 in 1981. The growing number of elderly people, along with an increasing incidence of divorce and of young people choosing to live alone for some years after leaving the parental home, have contributed to a rate of increase in the number of households almost three times as great as the population growth.

### 2.3 Taking the census

**Decennial census.** The most recent general census of population was taken on June 3, 1981. The basic legal reason for the decennial census is to enable a redistribution of seats in the House of Commons.

Under the terms of the Electoral Boundaries Readjustment Act, the census must provide population counts by electoral districts (see Chapter 19, for electoral district boundaries established by the 1976 Representation Order).

The 1981 Census was the 12th since Confederation in 1867. The decennial census has followed an uninterrupted sequence since 1851.

**Quinquennial census.** In 1956 a new census was added, to keep statistical information abreast of the demographic and socio-economic developments that affect decision making in both private and public sectors. These censuses have been taken every fifth year between decennial censuses.

For the 1981 decennial census, every person whose usual place of residence on June 3, 1981 was in Canada was asked questions covering date of birth, sex, marital status, relationship to Person One (instead of the former "head of household") and mother tongue (the language first learned and still understood). Housing type and tenure were asked for each household. Sampling was also used; every fifth private household provided answers on education, migration, income, housing, labour force participation and occupation.

The census is a principal source of information for measuring social and economic change, and for detecting those needs which necessitate the development and implementation of policies and programs such as regional development, health and welfare programs, education facilities, immigration, low-income housing and transportation networks.

**Population estimates.** In addition to the five-year census, estimates are constructed for the total population of Canada and for each province on both an annual and quarterly basis. The estimates of population begin with the preceding census counts. Births of each year are added and deaths subtracted; immigrants are added and an estimate of emigrants subtracted. Family allowance statistics showing the number of migrant families by province in conjunction with the migration estimate from Revenue Canada tax files are used as a basis for estimating interprovincial migration. The next census serves as a basis for revision of all annual population estimates of each intercensal period (Table 2.6).

Because of the growing interest in the expanding metropolitan areas a series of intercensal estimates for these areas was also begun in 1957. Births in the metropolitan areas were added to the census population and deaths subtracted. Immigrants reporting these metropolitan areas as places of destination were added and allowances made for losses by emigration. Also, net internal migration for these areas was estimated from family allowances data.

**Metropolitan areas.** Metropolitan Toronto was still the largest metropolitan area at the time of the 1981 Census. The population of almost 3 million had

grown by 7.0% since 1976. Montréal increased by 0.9% to about 2.8 million and Vancouver increased by 8.7% to almost 1.3 million over the same period. The highest percentage of growth over five years since 1976 was found in Calgary (25.7%), Edmonton (18.1%), Saskatoon (15.3%) and Oshawa (14.1%). The census definition for a metropolitan area is the main labour market area of an urbanized core (or continuously built-up area) having 100,000 or more population. There are 24 census metropolitan areas in Canada (Table 2.10).

## 2.4 Population distribution

Decennial and quinquennial censuses of Canada make possible periodic assessments of the nation's social and economic conditions and provide data on the distribution of population for many types of geographical, political and statistical areas.

Data from the 1981 Census showed that two provinces, Alberta at 37.5% and British Columbia at 25.6% had rates of population growth above the national level for the 1971-81 period. Yukon and Northwest Territories at 25.9% and 31.4% also exceeded the national rate. Ontario led the remaining provinces with a 12.0% increase. Prince Edward Island and New Brunswick each grew by 9.7%, Newfoundland by 8.7%, Nova Scotia by 7.4% and Quebec by 6.8%. The lowest rates of growth were recorded by Saskatchewan at 4.5% and Manitoba at 3.8%.

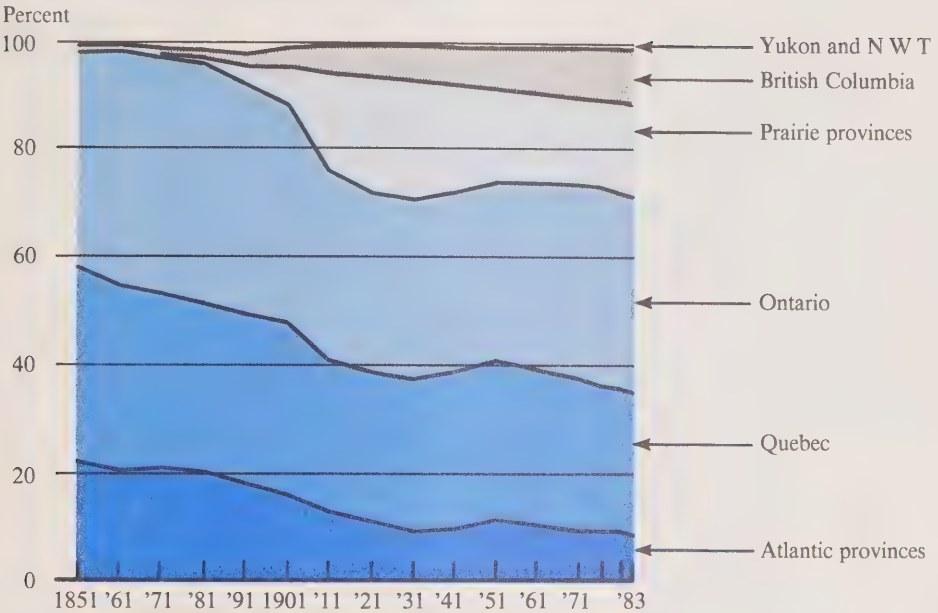
These differences marked a redistribution of Canada's population. The Atlantic provinces accounted for 9.2% of the population, down from 9.5% in 1971 and 11.6% in 1951. Quebec at 26.4% was down 1.5 percentage points in 10 years and 2.5 points since 1951. Ontario's share of Canada's population had declined for the first time since 1951. It had 35.4% of the population, down from 35.9% in 1976, the level to which it had climbed steadily from 32.8% in 1951.

The four western provinces and the two territories contained 28.9% of the population, up from 26.8% in 1971. Within the region, Alberta and British Columbia showed rates of growth consistently above the national average throughout the 1951-81 period. Their proportions of the total population increased from 6.7% to 9.2% for Alberta and 8.3% to 11.3% for British Columbia.

**Cities, towns and villages.** As at June 3, 1981, some 67.4% of Canada's population lived in 2,123 centres classified as incorporated cities, towns and villages. These are grouped into 13 broad size categories in Table 2.7. Canadian cities and towns having a population of over 50,000 in 1981 are listed in Table 2.8 together with figures for 1971 and 1976. The date of incorporation to their present status is indicated also.

**Census terms.** A census agglomeration (CA) for the 1981 Census was an area comprised of at least two

Chart 2.1  
Distribution of population by region, 1851-1983



Note: Atlantic includes Newfoundland from 1951.

adjacent municipal entities, each at least partly urban. Its urbanized core is a continuous built-up area including the largest city and, where applicable, the urban part of surrounding municipalities, the urban fringe and rural fringe. A CA with an urbanized core of 100,000 or more, based on previous census figures, is called a census metropolitan area (CMA). Usually the CMA or CA takes the name of its largest component city.

#### 2.4.1 Population density

At 2.60 persons a square kilometre in 1981, Canada's average population density still ranks among the lowest in the world. However, such average density figures over all types of land terrain and open spaces in the country or in individual provinces obscure the high urban densities which reach 3,566.1 persons/km<sup>2</sup> in Montréal and 3,392.2/km<sup>2</sup> in Toronto. Moreover, the highest provincial densities are not necessarily found in the provinces with the largest populations. For example, the highest average density of any province is that of Prince Edward Island (21.6 persons/km<sup>2</sup>) which has the smallest population and represents an anomaly resulting from its limited land area rather than from heavy concentrations of population. In contrast, the far more populous British Columbia, with its vast mountainous regions and areas of sparse population,

has an average density of only 3.1 persons/km<sup>2</sup>, while largely-rural Saskatchewan has 1.7 and Manitoba 1.9.

#### 2.4.2 Urban and rural

The urban population was defined in the 1981 Census as all persons living in an area having a population concentration of 1,000 or more and a population density of at least 400 per square kilometre. All the remaining population was classified as rural. Between 1976 and 1981, Canada's urban population grew by 5.0%, while the rural population, reversing past trends, grew slightly faster, by 8.9%.

In 1981, 75.7% of Canada's population lived in an urban environment, with the degree of urbanization ranging from 36.3% in Prince Edward Island to 86.3% in Ontario. British Columbia also was highly urbanized (77.9%). Only in Prince Edward Island and Northwest Territories was the rural population larger than the urban population, while in New Brunswick the two categories were nearly equal.

The rural population, 24.3% of the Canadian total in 1981, was classified as non-farm or farm. The rural farm population was defined for census purposes as members of households of farm operators who had lived on their farms for any length of time during the 12-month period prior to the census. In 1981 only

1.0 million were classified as farm population; 4.9 million as rural non-farm.

## 2.5 Demographic and social characteristics

### 2.5.1 Age, sex and marital status

The distribution of a population by age, sex and marital status represents the effect of the most fundamental variables of vital trends: births, deaths, marriages and dissolutions of marriages. Social and economic factors, by their effects on vital events and migration, also influence this distribution. An unbroken series of census data is available as far back as the first Census of Canada in 1871; only recent trends are summarized here. Tables 2.13 to 2.16 present further details.

**More females than males.** The 1981 Census showed a continuation of the trend, first recorded in 1976. At that time the sex ratio was 99.2 males for every 100 females. In 1981 it was 98.3 males for 100 females. For those over 65 years of age, the ratio was 74.9 to 100.

Before 1976, with the exception of 1971 when the sex ratio was almost balanced (at 100.2 males per 100 females), all other censuses showed Canada's population as being male dominated. In 1961, for example, the ratio was 102 males for every 100 females. The historical data show that the sex ratios recorded in decennial censuses of 1851 through 1961 fluctuated in the range of 102.2 to 112.9 males for every 100 females.

One factor in the variation in sex ratios has been immigration which has generally been male selective. This was particularly responsible for the upward trend in sex ratios between 1881 and 1911. However, the change in the sex pattern of migration shows increasing female immigrants in recent periods.

**Fewer children, more elderly.** Two of the most striking changes in the structure of Canada's population were a 7% decline in the number of children under 15 years and a 17.9% increase in the number of persons over 65.

From 1976 to 1981 the population aged 14 and under decreased from 5.9 million persons or 25.6% of the total to 5.5 million (22.5%). The number of persons over 65 years grew from about 2 million or 8.7% of the total to about 2.4 million (9.7%).

In other words, the proportion of the elderly is increasing and growing faster than the population in general. In 1901 only five people in every 100 were over 65. By 1981 the proportion had increased to nearly 10 in 100.

There are three main causes for these changes. Fertility rates declined from a high point of 3.54 per woman in 1921, to a low of 1.75 in 1980. The age level of thousands of immigrants who arrived earlier in the century (2.6 million between 1911 and 1931) is now over 65. Life expectancy has been increasing

(from an average of 61 to about 73 years between 1931 and 1971) due to medical advances and improvement in the overall standard of living.

**The adult working population** (20-64 years) increased substantially, with a gain of 1.4 million or 11.3% in the 1976-81 period.

Of special interest in connection with employment and unemployment is the population in the junior working ages (20-34) and the senior working ages (35-64). In 1981 the count for the junior group was almost 6.6 million, up 14% from almost 5.8 million in 1976. In the senior group the corresponding figures are: 1981, about 7.6 million and 1976, almost 7 million, a 9% increase.

**Marital status.** The marital status composition of the 1981 population indicates increasing proportions of persons married (1981, 49.1%; 1976, 47.7%) and divorced (1981, 2.1%; 1976, 1.3%); a decreasing proportion of persons never married (1981, 44.1%; 1976, 46.4%); and a fairly stable proportion of persons widowed (1981, 4.8%; 1976, 4.5%). Generally, these trends also apply to each sex separately.

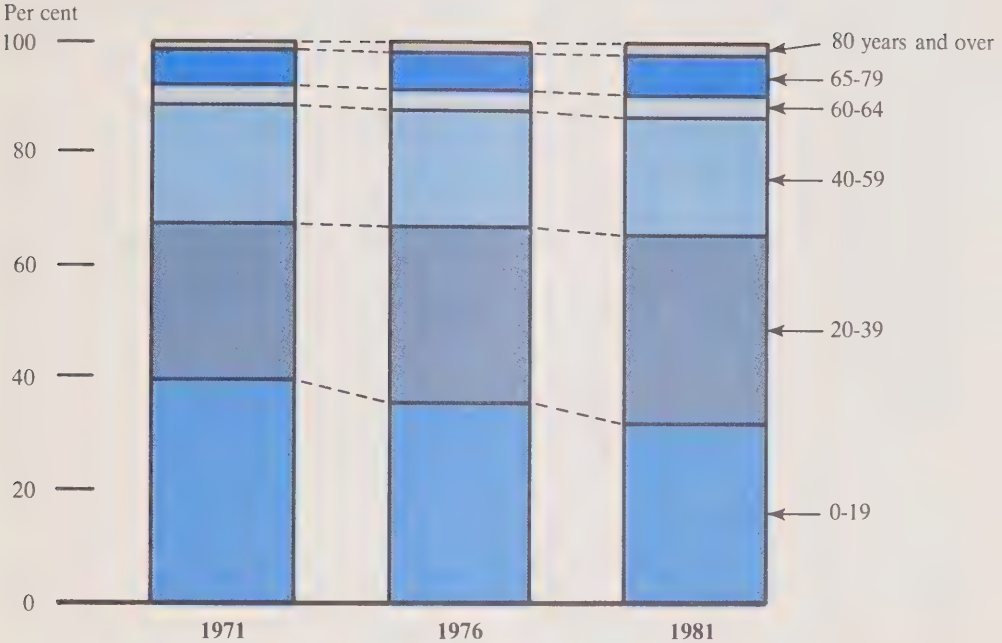
The most dramatic change concerns Canada's divorced population which increased 65% to 500,100 in 1981 from 302,500 in 1976; divorced males increased from 119,000 in 1976 to 202,800 in 1981 (a 70% increase). The vast majority of the divorced are over 30. The age range 30-49 accounts for more than half the divorced population of each sex.

Among the widowed, the overwhelming number of widows, (958,100 or 83%) compared to widowers (199,500 or 17%) is a consequence mainly of higher age-specific rates of both mortality and remarriage among males than among females. Another significant cause is the fact that women usually marry men who are older than themselves.

Analyses of marital status composition conducted in conjunction with sex and age result in two major findings: a decline of 5% during 1976-81 in the proportion of married persons in the age range 20-29 and a corresponding increase in the proportion of single persons in that age range. (Data by quinquennial age group confirm these findings for virtually the entire young adult population.) The implication is that the 1976-81 increase in the proportion married in the population as a whole is a consequence of the changing age structure, rather than of a tendency to marry at a younger age. The same applies to the 1976-81 decrease in the proportion single in the population as a whole.

In connection with the recent decline in birth rates, the percentages of women in the prime child-bearing ages 20-39 were: 1981, 33.3%; 1976, 30.5%. That birth rates have been declining even though the population in the prime child-bearing group has increased further emphasizes the drop in birth rates.

Chart 2.2  
**The aging population**



**2.5.2 Language**

In the 1981 Census, a question on language was asked about mother tongue, the language first spoken in childhood and still understood. It was the first Canadian census to identify separately the various aboriginal languages spoken in Canada. Cree and Ojibway were the largest aboriginal language groups. A total of 18,840 people reported Inuktitut as their mother tongue. Asian languages were also more specifically identified. The census showed that languages such as Punjabi, Vietnamese, Filipino and Tagalog have been learned during the childhood of many Canadians.

**Mother tongue.** The proportion of the Canadian population reporting English mother tongue decreased slightly from 61.42% in 1976 to 61.28% in 1981, while those reporting French increased from 25.60% to 25.67%. The French mother tongue proportion increased in New Brunswick, Quebec, Alberta, British Columbia, Yukon and Northwest Territories; it declined in the other provinces.

Italian was the third and German fourth among mother tongue groups and their numbers increased by 9.2% and 9.7% respectively. Both substantially exceeded the general rate of population growth, 5.9%.

People having Indo-Pakistani languages as their mother tongue doubled to 117,000 between 1976 and

1981. The population with Chinese mother tongue increased by almost 70% to reach 224,000 in 1981. Cree was the most common of the native languages, the mother tongue of over 67,000 people.

**Official languages.** The 1981 Census data on language showed that while English was the language that could be spoken by most Canadians, the number of people able to speak both official languages, English and French, increased by 27% between 1971 and 1981, more than double the rate of population growth over the same period.

Almost 3.7 million people considered themselves able to converse in both official languages. Of these, 1.1 million (30%) claimed English as their mother tongue and 2.2 million (61%) listed French. In the 1971 Census, 24.5% of the 2.9 million bilingual Canadians had English as their mother tongue while 68% had French. Over half of the increase in bilingual Canadians since 1971 was accounted for by people whose mother tongue was English.

**2.5.3 Ethnicity, religion, birthplace**

**Ethnic groups.** The 1981 Census was the first to recognize more than one ethnic origin for an individual. At that time, 1.8 million persons (7.6% of the population) identified their heritage as coming from more than one ethnic group. Approximately

76% of these reported British as one component of their ethnic origin.

Among those who provided a single response to ethnic origin, the largest group was British, 40.2% of the population. French was the second largest group at 26.7% followed by German (4.7%), Italian (3.1%) and Ukrainian (2.2%).

Newfoundland had the largest proportion of its population with a common ethnic background, over 92% reporting British as the sole ethnic heritage. In Quebec just over 80% identified French as the sole ethnic background. At the other extreme the population of Saskatchewan, with 38% British origin, was the least concentrated in a single origin.

Northwest Territories was the only area where the largest ethnic designation was neither British nor French, but native peoples.

**Religious denominations.** In 1981 the 11.4 million Catholics formed 47.3% of the population and 9.9 million Protestants 41.2%. The remaining population was divided among those with no religious preference, 7.4%, Eastern Orthodox, 1.5%, Jewish, 1.2% and other small groups 1.3%.

Two provinces were predominantly Catholic, Quebec with 88.2% of its population and New Brunswick with 53.9%. All other provinces had a Protestant majority.

Nearly 1.8 million persons who reported themselves as having no religious preference showed an increase in proportion in this category by 90% between 1971 and 1981.

One-half of persons of Jewish religion lived in Ontario, where they numbered 148,255 or 1.7% of the population. Another one-third or 102,355 were in Quebec, where they accounted for 1.6% of the population.

Buddhists recorded the largest 10-year increase among religious groups, up 223% to 51,955. Pentecostals had the second largest rate of growth, increasing 54%. Other religious groups increasing since 1971 included Mormons, up 36%; Roman Catholics, up 13%; Jewish, up 8%; and the United Church, up 1%. By contrast, Unitarians decreased by 31%; Doukhobors, 27%; Presbyterians, 6%; and Anglicans 3%.

The Atlantic provinces had the smallest proportion stating no religious preference, ranging from 1% in Newfoundland to 4% in Nova Scotia. This category rose to just over 7% of the population of both Ontario and Manitoba, to 11.7% in Alberta, 20.3% in Yukon and 20.5% in British Columbia. Just over 6% of the people of both Saskatchewan and Northwest Territories reported no religious preference.

**Place of birth.** The 1981 Census showed that nearly 3.9 million persons, 16.1% of the population were born outside Canada. This was an increase of 17.3% over the number in the 1971 Census.

Europe continued to be the main area of birth of the population born outside Canada, but the

European-born population decreased from 79.7% of the total foreign born in 1971 to 66.9% in 1981.

Between 1971 and 1981 there were large increases in the number of persons born in Asia, up 228% to 543,495, the Caribbean Islands, up 153% to 172,245 and Central and South America, up 199% to 107,960.

In 1981, 85% of the Canadian born were living in their province of birth. This varied widely by province from 92.2% for those born in Quebec to 58.2% for those born in Saskatchewan.

Reflecting the impact of mobility is the fact that nearly 30% of the Canadian population was born outside the 1981 province of residence. In British Columbia 54% of the population was born outside the province but only 6% of Newfoundland's population was born elsewhere.

### 2.5.4 The native peoples

Many centuries before the first European settlers arrived, the country that is now Canada received immigrants in the prehistoric period. Present-day Inuit and Indians are the descendants of these early settlers but as a result of heavy immigration by other groups they now represent only 2% of Canada's population. Demographic data on their numbers and locations, from the 1981 Census summary figures, show a total of 491,460 native Indians and 25,390 Inuit. The former figure includes both registered or status Indians and non-status.

There were 323,782 persons registered as status Indians by the Indian affairs and northern development department at December 31, 1981. These persons are entitled to registration in accordance with the terms of the Indian Act. They comprise 576 bands who occupy or have access to some 2,251 reserves having a combined area exceeding 2.6 million hectares. Membership of these bands is distributed among the provinces and territories. The 29 Indian bands in Yukon and Northwest Territories occupy or have access to eight reserves and reside in 50 settlements that have not been formally designated as reserves. There are at present no Indian bands in Newfoundland.

Nearly two-thirds of the Inuit reported in the 1981 Census lived in communities in Northwest Territories (15,910), and the remainder mainly in Arctic Quebec (4,875), Labrador (1,850) and Northern Ontario (1,095).

## 2.6 Households and families

The number of private households in Canada increased to nearly 8.3 million in 1981 from 7.2 million in 1976. Of the total, 6.2 million (75.2%) were family households and 2 million (24.8%) were non-family households.

A private household, as defined in the census, consists of a person or a group of persons (other than foreign residents) who occupy one dwelling and do not have a usual place of residence elsewhere in

Canada. It excludes collective households such as hotels, hospitals and prisons. It usually consists of a family group with or without lodgers or employees, but may comprise a group of unrelated persons, one person living alone, or two or more families sharing the same dwelling. For census purposes, each person is a member of only one household.

Of particular note in the 1981 Census was the growth in the number of households, the decrease in the number of persons per household and a movement toward more non-family households.

The highest percentage of family households was in Newfoundland (87.7%), followed by New Brunswick (80.7%) and Prince Edward Island (79.0%), while British Columbia was the lowest with 71.7%.

Percentage increases in the number of households ranged from a high of 32% in Alberta and 20% in British Columbia to a low of 9% in Manitoba.

### 2.6.1 Household size and type

While the one-family household remained the major sub-type, its predominance decreased slightly to 74.1% from 77.3% in 1976 and 79.7% in 1971. Only 1.1% of family households contained more than one family occupying the same dwelling.

Among the non-family households, by far the greatest number (82.0%) had only one occupant. There were 18.0% with two or more persons. One-person households increased by almost 40% between 1976 and 1981, while households larger than seven persons decreased by over 40%. The average number of persons in each household dropped to 2.9 in 1981 from 3.1 in 1976 and 3.5 in 1971. Average household size declined from east to west. The average household size was largest in Newfoundland and Northwest Territories (3.8 persons) and smallest in British Columbia (2.7).

### 2.6.2 Family size and composition

A census family consists of a husband and wife without children or with children who have never married, regardless of age, or a lone parent with one or more children who have never married, regardless of age, living together in the same dwelling. Adopted children and stepchildren have the same status as own children. Persons living common-law were directed to report as "now married" on the 1981 Census questionnaire. They were therefore indistinguishable from the legally married, and appear as a husband-wife family in the census reports.

The number of families in private households in Canada increased to 6.3 million in 1981, from 5.7 million in 1976. Following the patterns of provincial population growth, and reflecting the factors of migration, the largest rate of increase occurred in Alberta (26.0% in the 1976-81 period), followed by British Columbia (15.8%).

**Families by size.** The number and average size of families are given in Table 2.29 for 1971, 1976 and 1981. The average size dropped to 3.3 persons in

1981 from 3.5 in 1976, and also decreased in all provinces and both territories. The largest average family size occurred in Northwest Territories (4.0 persons), the smallest (3.1) in British Columbia.

**Family structure.** Husband-wife families formed the vast majority of total families, 88.7% in 1981, though this was down from the 1976 level of 90.2%. Correspondingly, lone-parent families increased from 9.8% to 11.3%. This decrease in husband-wife families with associated increase in lone-parent families was observed in all provinces and territories. Among all the provinces, Newfoundland at 10.0%, and Saskatchewan at 9.6%, reported the lowest percentages of lone-parent families, and higher than average percentages of husband-wife families, at 90.0% and 90.4%. Yukon, New Brunswick and Quebec showed the highest percentage increases in lone-parent families, with corresponding decreases in husband-wife families. Lone-parent families rose in Yukon to 12.4% in 1981 from 10.0% in 1976, in New Brunswick, to 12.2% from 10.0% and in Quebec to 12.5% from 10.3%.

**Children in families.** In the 1981 Census as in 1976, statistics for children in families included never-married sons and daughters of all ages who were living in the same dwelling as their parents. Unrelated wards, foster or guardianship children whether or not pay was received for them were classified as lodgers rather than as children in families.

In 1981, there were almost 8.7 million children in families in private households, a decrease of 2.5% from the 1976 level of 8.9 million. Except in Alberta, British Columbia and Northwest Territories, the number of children at home declined, reflecting the continued downward spiral of fertility and family formation and hence the continuing steep declines in the number of younger age children at home. In Quebec, the number of children decreased by 156,330 or 6.2% for that province, although representing 71.0% of the total national decline of 220,060 children reported for the period 1976 to 1981. The decline in number of children was much smaller in Manitoba, at 24,165, but this represented a 6.4% decrease for Manitoba.

On the other hand, in Alberta, the addition of about 68,400 children at home reported in 1981 represented a 9.8% increase, more than four times the 2.4% increase reported for British Columbia. The increase in Northwest Territories was minimal, slightly under 1.0%.

The average number of children in each family declined from 1.6 in 1976 to 1.4 in 1981.

## 2.7 The vital components

Vital statistics are an indispensable tool to the measurement and interpretation of population change. They provide information such as the rate at which men and women marry and have children,

marriages are contracted or dissolved, and population increases due to births and decreases due to deaths. The statistics are derived from the records of events of births, deaths, marriages and divorces registered in the provinces and territories.

**History of vital statistics.** Historically vital statistics data for Canada and the provinces go back to 1921. These can be obtained from a variety of periodic publications as well as from the repository of unpublished tabulations at the vital statistics and disease registries section of Statistics Canada.

**Summary of principal data.** Table 2.34 provides a summary of the principal vital statistics for 1981 for Canada, the provinces and territories, with comparative figures by five-year periods back to 1961-65.

### 2.7.1 Births

Of all the demographic factors which produce changes in population (fertility, mortality, nuptiality, immigration, emigration), none exerts greater influence than the rate of reproduction or fertility.

**Birth rates.** Accurate figures on Canadian crude birth rates are available since 1921 when the annual collection of official national figures was initiated. The following rough estimates of the average annual crude rates of live births (per 1,000 total population) for each 10-year intercensal period between 1851 and 1921 may be inferred from studies of early Canadian census data: 1851-61, 45; 1861-71, 40; 1871-81, 37; 1881-91, 34; 1891-1901, 30; 1901-11, 31; 1911-21, 29.

The annual crude birth rates declined steadily from 29.3 in 1921 to a low of 20.1 in 1937, recovered somewhat in the late 1930s and rose slightly during the period of World War II to 24.3 in 1945. Following the war the rate rose to a high of 28.9 in 1947. Between 1948 and 1959 it remained remarkably stable at between 27.1 and 28.5, but has since declined dramatically to a record low of 15.4 by 1974. The rate increased slightly for a few years and then declined to 15.3 in 1981 and the emerging trend seems to be one of further decline. Provincial rates have followed this trend with some regional differences.

Since these crude birth rates are based on the total population they do not reflect the true fertility of the women in reproductive ages. A more accurate measure of fertility is one based on births to the number of women by age between the ages of 15 and 49 (Table 2.36).

**Stillbirths.** The 1,972 stillbirths of at least 28 weeks gestation reported in 1981 represented a ratio of 5.3 for every 1,000 live births (Table 2.35). The stillbirth ratio has been cut by more than half over the past quarter-century. The risk of having a stillborn child increases with the age of the mother. Although stillbirth rates for mothers of all ages have been declining, they continue to be much higher for older than for younger mothers.

### 2.7.2 Fertility rates

Since almost all children are born to women between the ages of 15 and 49, variations in the proportion of women in this age group to the total population will cause variations in the crude birth rate of different countries, or of different regions, even though the actual rates of reproduction or fertility of the women may be the same. It is therefore an accepted practice for comparison purposes to calculate age-specific fertility rates, the number of infants born annually to every 1,000 women in each of the age groups in the reproductive span.

Table 2.36 indicates that women in their 20s are the most reproductive. On the average, for every 1,000 women between 20 and 24, there were 97 infants born during 1981. Expressed another way, about one woman out of 10 in that age group gave birth to a live-born infant. The highest rate is found in the 25-29 age group with an average of 127 for every 1,000. Another measure of fertility is the gross reproduction rate which represents the average number of daughters that would be born to each woman throughout her child-bearing ages (15 to 49) if the fertility rate of the given year remained unchanged during the whole of her child-bearing period. A rate of 1.000 indicates that, on the basis of current fertility and without making any allowance for mortality among mothers during their child-bearing years, the present generation of child-bearing women would maintain itself.

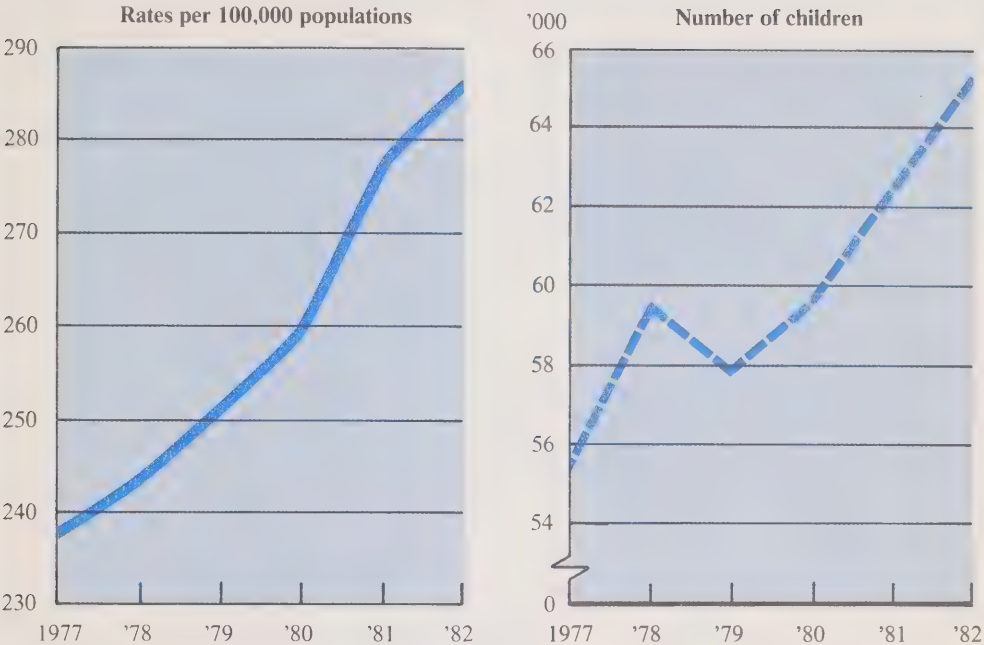
Canada has had one of the highest gross reproduction rates among industrialized countries. Even at low birth rates in the 1930s the rate varied between 1.300 and 1.500 and since World War II has ranged from 1.640 in 1946 to a high of 1.915 in 1959. However, since 1963 the national gross reproduction rate has dropped sharply to 0.829 in 1981 — appreciably below the replacement level of 1.050. Among the provinces, Ontario and Quebec had the lowest gross reproduction rates in 1981, and all provinces had rates below the replacement level.

### 2.7.3 Natural increase

The excess of births over deaths, or natural increase, has been the main factor in the growth of Canada's population. Some idea of the rate of natural increase back to the mid-1800s may be obtained from the estimates of births and deaths which produce the following natural increase rates (per 1,000 population): 1851-61, 23; 1861-71, 19; 1871-81, 18; 1881-91, 16; 1891-1901, 14; 1901-11, 18; 1911-21, 16.

During the 1920s and early 1930s the birth rate declined much more rapidly than the death rate and the natural increase rate dropped to a record low of 9.7 in 1937. Higher birth rates during the 1940s and 1950s and a continued declining death rate caused the natural increase rate to rise steadily from 10.9 in 1939 to a record 20.3 in 1954. After that there was a steady drop due to declining birth rates and the

Chart 2.3  
Divorces by rates and by dependent children



natural increase rate fell below 10 for the first time in 1971 at 9.5 and dropped further to 8.0 in 1974. It edged up slightly in 1976 to 8.4, but fell to 8.2 in 1981. Table 2.34 gives average rates of natural increase in the provinces for five-year periods from 1961 to 1981 and for the year 1981.

2.7.4 Deaths

The Canadian crude death rate is one of the lowest in the world (7.0 per 1,000 population in 1981). After a gradual decline over the past century, the rate has levelled off since 1967. In the opinion of demographers, a further reduction in the crude death rate is likely to be small. However, the sustained aging of the population due to continued declines in fertility may cause some increases in the death rate in future years.

**General mortality.** No official crude death rates (rates per 1,000 total population) are available prior to 1921. However, studies of the early Canadian censuses resulted in the following estimated annual crude rates: 1851-61, 22; 1861-71, 21; 1871-81, 19; 1881-91, 18; 1891-1901, 16; 1901-11, 13; 1911-21, 13.

Typical of pioneer populations, Canada had high death rates in the mid-1800s with the crude death rate estimated between 22 and 25. It is assumed that while mortality was high at all ages, the rate among infants and children must have been particularly high. Even in 1921 the Canadian infant mortality rate was 102.1 per 1,000 live births. With increasing

urbanization and improved sanitation and medical services, the crude death rate dropped by 50% from 22 to 11 between 1851 and 1930. It continued to decline to a low of 7.3 in 1970 and 1971, fluctuating slightly for a few years and further declining to 7.0 in 1981.

2.7.5 Marriages

In 1981, there were 190,082 marriages solemnized in Canada compared to 193,343 in 1976. The rate of marriage declined from 8.4 to 7.8 per 1,000 population. Alberta recorded 9.7 marriages per 1,000 population and continued to have the highest rate of any province (Table 2.37).

In 1981 the median age at marriage for persons never previously married — the age above and below which half the marriages occurred — was 24.6 for bridegrooms and 22.5 for brides. Bridegrooms averaged 25.7 years, and brides 23.5.

**Religious denomination.** The influence of religion in selecting marriage partners is shown in Table 2.39. Most marriages in Canada were between persons of the same religious denomination. The proportions were higher for such denominations as Jewish and Roman Catholic and lower for others: Anglican, Baptist, Presbyterian and United Church.

2.7.6 Divorces

The number of decrees absolute granted in Canada has risen sharply as a result of the 1968 changes in

divorce legislation. Divorces rose to over 67,671 in 1981 from an average of about 11,000 divorces per year over the period 1966-68. British Columbia's divorce rate of 347.4 per 100,000 population, and Alberta's 376.2 were the highest among the provinces. By comparison, Newfoundland and Prince Edward Island had the lowest rates, 100.2 and 152.6 (Table 2.40). Estimates for 1975-77 suggest that one out of three first marriages and one out of four succeeding marriages end in divorce.

**Sex of petitioners.** Background information shows that almost twice as many divorces were granted in 1981 to female petitioners as to males, 44,205 to 23,466. This represents a ratio of 53 divorces to male petitioners for every 100 to females.

**Grounds for divorce.** Statistics show that in 1981 adultery was the most frequent cause of divorce (28,241 cases), replacing separation for not less than three years (26,059 cases). Other alleged grounds for divorce and reasons for marital breakdown include mental cruelty (19,768); physical cruelty (13,417); addiction to alcohol (1,543); and desertion by petitioner for not less than five years (1,066).

**Dependent children.** Of the 67,671 divorces granted in 1981, 48% involved no dependent children. Divorces involving dependent children ranged from 56% in 1972 to 52% in 1981. More than two out of every five of the latter cases involved one child only, and nearly three out of five involved two or more children.

**Duration of marriage.** The duration of marriage in 17.0% of the divorces in Canada in 1981 was less than five years and in nearly one-half of the cases it was less than 10 years. The short-term trend during the late 1970s indicated a relative shortening of the average duration of marriage before divorce. In 1975 only 15.6% of the divorces involved marriages of less than five years and 43.7%, less than 10 years. By 1979, 17.7% of couples divorced had been married less than five years and 49.7% less than 10 years. The median duration of marriage for couples who got divorces in 1975 was 11.1 years compared to 10.0 in 1981.

**Marital status.** More than nine out of every 10 persons divorced in 1981 were involved in a first divorce. Around 8% of the divorces were granted to persons who were divorced at the time of their last marriage and about 1% to those who were widowed.

## 2.8 Migration

Besides the vital components of population change (fertility, mortality, nuptiality), the flows of population across national borders (immigration and emigration) also affect the country's growth and demographic structure.

### 2.8.1 Immigration

Canada's immigration policy is based on the principle of non-discrimination and emphasizes the

selection of immigrants who are likely to adapt to the Canadian way of life, making a positive contribution to economic and cultural development in Canada.

Canadian immigration officers apply standard norms of assessment to applicants from all parts of the world and, apart from sponsored relatives and refugees, select those with skills in short supply in Canada.

The employment and immigration commission also regulates the entry of temporary workers and foreign students planning to enrol in public or private institutions and examines millions of visitors who come to Canada each year as tourists or for family, social, cultural or other reasons. The commission facilitates the return of Canadian residents and enforces measures to protect the health, welfare and security of Canadians.

**The Immigration Act, 1976** proclaimed in April 1978, brought Canada's immigration policy into sharper focus than ever before. It stated, for the first time in Canadian law, the basic principles underlying immigration policy — non-discrimination, family reunion, humanitarian concern for refugees and promotion of national goals. The legislation links the immigration movement to Canada's population and labour market needs and, after consultation with the provinces, provides for an annual forecast of the number of immigrants Canada can comfortably absorb. The act establishes a new family class, allowing Canadian citizens and permanent residents to sponsor a wide range of relatives, confirms Canada's protective obligations to refugees under the United Nations Convention and establishes refugees as an admissible immigrant class. It requires that immigrant and visitor visas and student and employment authorizations be obtained abroad, and prohibits visitors from changing their status from within Canada.

Canada's refugee policy includes two major elements, resettlement and protection. Traditionally, permanent residence has been provided for the displaced and persecuted when other solutions to refugee problems were not possible. The size and scope of the resettlement program are determined through an annual refugee plan approved by cabinet. As a complement to the plan, humanitarian assistance is extended to others who are displaced or in need due to emergency situations.

The other aspect of Canada's refugee program provides protection for visitors who claim to be refugees. A system is in place to determine the status of such claimants.

Through both refugee and humanitarian programs, more than 20,000 people were helped to resettle in Canada in 1982.

Immigration officers are situated at more than 60 Canadian embassies and consulates around the world and at about 500 Canada immigration centres and ports of entry in Canada.

Chart 2.4  
Where immigrants came from



Note: Fiscal year ending March 31.

The extent of immigration to Canada in any period is affected by conditions at home and abroad. The Immigration Act requires the minister, after reviewing domestic economic and demographic trends, to announce annually the number of immigrants Canada plans to admit over a specified period. The announced level for 1983 was 105,000 to 110,000. Immigrant arrivals for the years 1955-81 are shown in Table 2.45.

**Origin of immigrants.** In 1981 Canada received 128,618 immigrants from various countries of origin, down from 143,117 in 1980. Tables 2.46 and 2.47, showing the country of last permanent residence and of citizenship of immigrants, indicate that by world area Europe, Africa and North, South and Central America, contributed a higher proportion of the total immigration in 1981 than in the previous year. The British Isles were the largest source area for immigrants with 21,154 in 1981, followed by the United States with 10,559.

**Destination of immigrants.** On arrival in Canada, immigrants are asked to state their intended destination. According to these records, Ontario absorbed by far the highest proportion of arrivals during 1981 — 42.7% of both males and females. British Columbia was the second most-favoured province of destination, receiving 16.8% of males and 17.4% of females, followed by Quebec with 16.5% of males and 16.4% of females. The proportions intending to settle in the Prairie provinces were 21.5% for males and 14.7% for females, and in the Atlantic provinces, 2.4% for males and 2.3% for females. The provincial distribution has changed little from year to year over the past two decades.

**Sex, age and marital status.** The sex distribution of immigrants for 1976-81 is shown in Table 2.49. In 1981 females constituted 50.9% of the immigrants and males 49.1%. Except for 1980 the number of female immigrants coming into Canada was higher than the number of male immigrants in every year from 1976 to 1981. Table 2.50 gives the marital status of immigrants for 1979 and 1980 and age groups for 1981.

**Data from the 1981 Census.** Just under 16% (3.8 million) of Canadian residents were originally immigrants, at the time of the 1981 Census. The structure of the immigrant population had undergone substantial change over the previous 15 years. Those born in Europe still comprised the largest group, nearly 2.6 million, and 83% of these arrived since World War II.

According to the census, Europe remained the primary source of the total immigrant population but its share of those still living in Canada declined from 92% for the 1945-54 period to 36% over the 1970-81 period.

Immigrants from Asia, representing 2.5% of all immigrants for the period 1945-54 increased to

almost 32% of all immigrants since 1970. More than three-quarters of immigrants born in Asia have arrived since 1970.

For the recent period 1978-81, the data on the immigrant population by place of birth show only 29.7% of immigrants from Europe, but 43.8% from Asia and between 5% and 10% from each of the United States, Caribbean Islands and Central and South America.

## 2.8.2 Emigration

Since the only statement a Canadian resident may be required to file on leaving the country is an income tax return, it is difficult to estimate the annual number of emigrants. Income tax files can be used for this purpose, but the estimates derived from them are invariably too low because not all emigrants file tax returns after leaving.

Another source of data for emigration estimates is the census. First, the total population growth is calculated from the counts recorded in two successive censuses; then, the number of births and immigrants for the same period is subtracted and the number of deaths is added. The result is an estimate of the number of emigrants for the intercensal period (the period between the two censuses). This method was used between 1961-62 and 1975-76.

There is also a third source of data, family allowance records. When a family leaves the country, the children are no longer eligible for family allowances, and the records are updated accordingly. These data indicate children who emigrate. The next step is to estimate the number of adult emigrants: the probability of emigration for children according to family allowance data is multiplied by the ratio of adults to children in the probabilities of emigration according to income tax records. Once this is done, adult emigration and total emigration are calculated. This method was tested and used for the 1976-81 period.

The number of emigrants varies from year to year, but there has been a decline in emigration since the 1966 Census. Specifically, the number has decreased each year since 1967-68, except for 1973-74 and the 1977-79 period. In 1967-68, 111,500 people left the country, but only 41,750 in 1981-82, according to preliminary estimates, with an annual average of 72,000 emigrants since 1966.

## 2.8.3 Internal migration

As people move from one place to another within a nation, they set up patterns of migration which differ in intensity and directional flow. These internal movements have marked effects on regional economies and influence future population growth. Thus it is of value to measure these various migration streams, such as from rural to urban centres, from cities to suburbs, and from one province or economic region to another.

**Lifetime migration by province of birth.** Census figures on province of birth shed some light on lifetime migration flows by comparing the number of persons born in a given province with their present province of residence. Such figures do not indicate the periodicity of the migrating process, and apply only to the Canadian-born population presently living in a given province. Nevertheless they do reflect something of the major patterns of interprovincial movement over the years.

Data from the 1981 Census (Table 2.52) show that Ontario, Alberta, British Columbia, Yukon and Northwest Territories were net gainers of lifetime migrants from other provinces, while the remaining provinces were net losers. Quebec showed only 4.1% of the 1981 Canadian-born population as having been born in another part of Canada and Newfoundland 4.3%, while Yukon showed the highest number (65.3%). These percentages reflect low rates of Canadian-born migrants to these two provinces and a high rate to Yukon. However, 53.6% of Yukon-born persons migrated, while the percentages of Quebec-born migrants (7.8%) and Ontario-born (10.1%) reflected low rates.

**Migration by residence five years ago.** Useful estimates on internal migration result from questions in national censuses to determine the exact place of residence of each person on the preceding census date five years earlier. From a comparison with the location of their present residence, it is possible to estimate the size, directional flows and characteristics of the migrating population. The 1981 Census included questions on place of residence on June 1, 1976.

Table 2.53 shows almost half (47.6%) of Canada's population age 5 and over in 1981 living in a different dwelling than five years earlier; 24.9% had moved within the same municipality and 22.7% had moved from one municipality to another. The last group consisted of 15.1% who moved within the same province, 5.1% from one province to another, and 2.5% from outside Canada.

**Migration by mother tongue.** Inclusion of mother tongue in the analysis of net internal migration patterns from 1976 to 1981 shows that the French mother tongue population in Alberta increased by 15,120 or 25%. Newfoundland's net loss due to internal migration of 655 people whose mother tongue is French represents just over 24% of French mother tongue population in that province. In Quebec internal migration decreased the English mother tongue population by 106,310 or 15.3% and the French mother tongue population decreased by 18,060, or 0.3%.

Table 2.54 summarizes the effect of migration on provincial populations for 1976-81. Alberta was the most favoured province of destination for migrants from other provinces (29.5%) followed by Ontario (22.0%) and British Columbia (20.6%). Ontario,

however, was the largest single provincial source of interprovincial migrants (28.8%) resulting in a net internal migration loss of 78,065 people. Alberta and British Columbia were the only provinces to experience net internal migration gains. The remaining provinces and Yukon and Northwest Territories recorded losses.

The overall effect of immigration (including returning Canadians) for 1976-81 was a net migration gain for Prince Edward Island, Ontario, Saskatchewan, Alberta and British Columbia. Among provinces receiving the largest share of immigrants were Ontario (44.1%), British Columbia (17.0%) and Quebec (15.2%). However, the 1981 Census did not count emigrants and therefore the data do not take into account the effects of emigration.

**Migration to urban or rural localities.** Table 2.55 shows migration by the urban or rural status of residence on June 1, 1976 and June 3, 1981. Urban municipalities were the favourite destination of all migrants, as well as the major locality of origin. Immigrants from outside Canada showed the greatest trend to locate in urban areas (90.5%) with 85.3% choosing a census metropolitan area. The pattern was less pronounced for internal migrants as only 75.2% chose to live in urban municipalities with the remaining 24.8% choosing to live in rural municipalities. In 1981, 82.1% of internal migrants who lived in urban municipalities had also lived in urban municipalities in 1976 while 17.9% were from rural municipalities. For migrants residing in rural municipalities in 1981, 77.1% came from urban and 22.9% from rural areas of origin.

## 2.8.4 Citizenship

**Citizenship statistics.** In 1981, 95% of the Canadian population were Canadian citizens. Of the 5% of persons without Canadian citizenship, more than half (54%) were residents of Ontario where they formed 7.6% of the population.

The Citizenship Act came into effect on February 15, 1977. It replaced the Canadian Citizenship Act, passed in 1947, which was the first independent naturalization law to be enacted in the Commonwealth and which created the concept of a Canadian citizen distinct from that of a British subject. Changes in the requirements for citizenship in the new law brought a large increase in applications for citizenship which resulted in a record number of grants in 1978, the year following the passing of the act.

Administered by the secretary of state department through 30 citizenship courts and offices, the act covers the conditions for acquisition, retention, loss and resumption of citizenship. All adult applicants for grant of citizenship face the same requirements, which include legal admission to Canada; three years residence in Canada; basic knowledge of Canada and of one of Canada's official languages; and compliance

with the national security and criminal record provisions of the Citizenship Act. The department administers federal-provincial agreements in support of citizenship and language instruction for adult

immigrants. During 1981, certificates of Canadian citizenship were issued, as proof of their status, to 42,497 persons who were already Canadian citizens. This was down from the 1980 total of 43,232.

### Sources

- 2.1-2.5.3, 2.6-2.6.2, 2.8.2-2.8.3 Demography Division, Statistics Canada.
- 2.5.4 Statistics Division, Reserves and Trusts Branch, Indian and Inuit Affairs Program, Indian and Northern Affairs Canada.
- 2.7-2.7.6 Health Division, Statistics Canada.
- 2.8.1 Employment and Immigration Canada.
- 2.8.4 Communications Branch, Secretary of State.

### Selected references

- 1981 Census of Canada, *Age, sex and marital status*. Statistics Canada 92-901, Ottawa, 1982.
- 1981 Census of Canada, *Census families in private households: Persons, children at home, structure and type, living arrangements*. Statistics Canada 92-905, Ottawa, 1982.
- 1981 Census of Canada, *Census families in private households: Selected characteristics*. Statistics Canada 92-935, Ottawa, 1984.
- 1981 Census of Canada, *Population: Geographic distributions*, 12 volumes. Statistics Canada 93-901 to 93-912, Ottawa, 1984.
- 1981 Census of Canada, *Ethnic origin*. Statistics Canada 92-911, Ottawa, 1984.
- 1981 Census of Canada, *Mother tongue, official language and home language*. Statistics Canada 92-910, Ottawa, 1983.
- 1981 Census of Canada, *Religion*. Statistics Canada 92-912, Ottawa, 1983.
- Divorce: law and the family in Canada*. Statistics Canada 89-502E, Ottawa, 1983.
- Estimates of population by marital status, age and sex, Canada and provinces*, 1980. Statistics Canada 91-203, Ottawa, 1982.
- Population projections for Canada and the provinces, 1976-2001*. Statistics Canada 91-520, Ottawa, 1979.
- Vital statistics*, 3 volumes: vol.1, *Births and deaths*; vol.2, *Marriages and divorces*; vol.3 *Mortality: summary list of causes*. Statistics Canada 84-204, 84-205 and 84-206, Ottawa, 1983-84.

TABLES

- ... not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed
- e estimate

p preliminary

r revised

certain tables may not add due to rounding

All figures of the 1971, 1976 and 1981 censuses in Tables 2.11, 2.13, 2.14, 2.16 to 2.22 and 2.25 to 2.33 have been subjected to a confidentiality procedure to prevent the possibility of associating small figures with an identifiable individual. The particular technique used is known as random rounding. Under this method, all last or unit digits in a table (including all totals) are randomly rounded (either up or down) to 0 or 5. This technique provides the strongest possible protection against direct, residual, or negative disclosures without adding any significant error to the census data. However, since totals are independently rounded they do not necessarily equal the sum of individual rounded figures in distributions. Also, minor differences can be expected for corresponding totals and cell values in various census tabulations.

2.1 Population summaries, selected years (thousands)

Province or territory	1961	1971	1976	1981	1983 <sup>1</sup>
Newfoundland	458	522	558	568	576
Prince Edward Island	105	112	118	123	124
Nova Scotia	737	789	829	847	858
New Brunswick	598	635	677	696	705
Quebec	5,259	6,028	6,234	6,438	6,515
Ontario	6,236	7,703	8,264	8,625	8,800
Manitoba	922	988	1,022	1,026	1,045
Saskatchewan	925	926	921	968	991
Alberta	1,332	1,628	1,838	2,238	2,345
British Columbia	1,629	2,185	2,467	2,744	2,818
Yukon	15	18	22	23	22
Northwest Territories	23	35	43	46	48
Canada	18,238	21,568	22,993	24,343	24,848

<sup>1</sup>April 1983, preliminary estimates, other years, Census of Canada.

2.2 Total population growth, Canada, 1851-1981

Census year	Population No.	Increase during intercensal period		Average annual rate of population growth %
		No.	%	
1851	2,436,297			
1861	3,229,633	793,336	32.6	2.9
1871	3,689,257	459,624	14.2	1.3
1881	4,324,810	635,553	17.2	1.6
1891	4,833,239	508,076	11.8	1.1
1901	5,371,315	538,076	11.1	1.1
1911	7,206,643	1,835,328	34.2	3.0
1921	8,787,949	1,581,306	21.9	2.0
1931	10,376,786	1,588,837	18.1	1.7
1941	11,506,655	1,129,869	10.9	1.0
1951 <sup>1</sup>	14,009,429	2,502,774	21.8	1.7
1956	16,090,791	2,071,362	14.8	2.8
1961	18,238,247	2,157,456	13.4	2.5
1966	20,014,880	1,776,633	9.7	1.9
1971	21,568,311	1,553,431	7.8	1.5
1976	22,992,604	1,424,293	6.6	1.3
1981	24,343,181	1,350,577	5.9	1.1

<sup>1</sup>Newfoundland included for the first time. Excluding Newfoundland the increase would have been 2,141,358 or 18.6%.

## 2.3 Components of population growth, Canada<sup>1</sup>, 1851-1981

Period	Total population growth '000	Births '000	Deaths '000	Natural increase '000	Ratio of natural increase to total growth %	Immigration '000	Emigration <sup>2</sup> '000	Net migration '000	Ratio of net migration to total growth %	Population at the end of the census period '000
1851-1861	793	1,281	670	611	77.0	352	170	182	23.0	3,230
1861-1871	460	1,370	760	610	132.6	260	410	-150	-32.6	3,689
1871-1881	636	1,480	790	690	108.5	350	404	-54	-8.5	4,325
1881-1891	508	1,524	870	654	128.7	680	826	-146	-28.7	4,833
1891-1901	538	1,548	880	668	124.2	250	380	-130	-24.2	5,371
1901-1911	1,835	1,925	900	1,025	55.9	1,550	740	810	44.1	7,207
1911-1921	1,581	2,340	1,070	1,270	80.3	1,400	1,089	311	19.7	8,788
1921-1931	1,589	2,420	1,060	1,360	85.5	1,200	970	230	14.5	10,377
1931-1941	1,130	2,294	1,072	1,222	108.1	149	241	-92	-8.1	11,507
1941-1951 <sup>3</sup>	2,503	3,212	1,220	1,992	92.3	548	382	166	7.7	14,009
1951-1956	2,071	2,106	633	1,473	71.1	783	185	598	28.9	16,081
1956-1961	2,157	2,362	687	1,675	77.7	760	378	482	22.3	18,238
1961-1966	1,777	2,249	731	1,518	85.4	539	280	259	14.6	20,015
1966-1971	1,553	1,856	766	1,090	70.2	890	427	463	29.8	21,568
1971-1976	1,424	1,758	823	934	65.6	841	352	489	34.4	22,993
1976-1981	1,288	1,820	842	978	75.9	588	278	310	24.1	24,343

<sup>1</sup>Includes Newfoundland since 1951.

<sup>2</sup>Emigration figures are estimated by the residual method. For actual estimates on emigration, see Table 2.51.

<sup>3</sup>Data on growth components shown for 1941-51 were obtained by including data for Newfoundland for 1949-50 and 1950-51 only.

## 2.4 Percentage change of population, intercensal periods

Province or territory	Percentage change				
	1956-61	1961-66	1966-71	1971-76	1976-81
Newfoundland	10.3	7.8	5.8	6.8	1.8
Prince Edward Island	5.4	3.7	2.9	5.9	3.6
Nova Scotia	6.1	2.6	4.4	5.0	2.3
New Brunswick	7.8	3.2	2.9	6.7	2.8
Quebec	13.6	9.9	4.1	3.4	3.3
Ontario	15.4	11.6	10.7	7.3	4.4
Manitoba	8.4	4.5	2.6	3.4	0.5
Saskatchewan	5.1	3.3	-3.0	-0.5	5.1
Alberta	18.6	9.9	11.3	12.9	21.7
British Columbia	16.5	15.0	16.6	12.9	11.3
Yukon	20.0	-1.7	27.9	18.8	6.0
Northwest Territories	19.1	25.0	21.1	22.4	7.4
Canada	13.4	9.7	7.8	6.6	5.9

## 2.5 Components of population change

Province or territory	Total population change		Natural increase		Net migration <sup>1</sup>	
	1971-76	1976-81	1971-76	1976-81	1971-76	1976-81
Newfoundland	35,621	9,956	43,870	36,914	-8,249	-26,959
Prince Edward Island	6,588	4,277	4,516	4,639	2,072	-359
Nova Scotia	39,611	18,871	32,141	27,507	7,470	-8,632
New Brunswick	42,692	19,154	32,905	29,173	9,787	-10,018
Quebec	206,681	203,958	227,812	266,201	-21,131	-62,264
Ontario	561,359	360,642	325,560	303,152	235,799	57,493
Manitoba	33,259	4,735	44,865	40,357	-11,606	-35,617
Saskatchewan	-4,919	46,990	38,151	45,601	-43,070	1,384
Alberta	210,163	399,687	95,857	123,227	114,306	276,458
British Columbia	281,987	277,859	82,828	94,469	199,159	183,396
Yukon and Northwest Territories	11,250	4,449	6,375	6,998	4,875	-2,553
Canada	1,424,292	1,350,578	934,880	978,238	489,412	372,342

<sup>1</sup>Calculated as a residual.

2.6 Total population, Canada and provinces, selected years (thousands)

Year	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	Canada
1921	—	88.6	523.8	387.9	2,360.5	2,933.7	610.1	757.5	588.5	524.6	4.1	8.1	8,787.8
1931	—	88.0	512.8	408.2	2,874.7	3,431.7	700.1	921.8	731.6	694.3	4.2	9.3	10,376.7
1941	—	95.0	578.0	457.4	3,331.9	3,787.7	729.7	896.0	796.2	817.8	5.0	12.0	11,506.7
1951	361.4	98.4	642.6	515.7	4,055.7	4,597.6	776.5	831.7	939.5	1,165.2	9.1	16.0	14,009.4
1956	415.1	99.3	694.7	554.6	4,628.4	5,404.9	850.0	880.7	1,123.1	1,398.5	12.2	19.3	16,080.8
1961	457.9	104.6	737.0	597.9	5,259.2	6,236.1	921.7	952.2	1,332.0	1,629.1	14.6	23.0	18,238.3
1966	493.4	108.5	756.0	616.8	5,780.8	6,960.9	963.1	955.4	1,463.2	1,873.7	14.4	28.7	20,014.9
1971	522.1	111.6	789.0	634.6	6,027.8	7,703.1	988.2	926.6	1,627.9	2,184.6	18.4	34.8	21,568.3
1972 <sup>c</sup>	530.0	112.6	794.6	640.1	6,053.6	7,809.9	991.2	914.0	1,657.2	2,241.4	19.5	37.3	21,801.5
1973 <sup>c</sup>	537.0	114.0	804.3	647.1	6,078.9	7,908.8	996.2	904.5	1,689.5	2,302.4	20.5	39.4	22,042.8
1974 <sup>c</sup>	541.5	115.2	811.5	653.6	6,122.7	8,054.1	1,007.5	899.7	1,722.4	2,375.7	20.5	39.6	22,364.0
1975 <sup>c</sup>	549.1	117.1	819.5	665.2	6,179.0	8,172.2	1,013.6	907.4	1,778.3	2,433.2	21.3	41.2	22,697.1
1976	557.7	118.2	828.6	677.3	6,234.5	8,264.5	1,021.5	921.3	1,838.0	2,466.6	21.8	42.6	22,992.6
1977 <sup>c</sup>	559.8	119.3	833.4	684.1	6,284.0	8,353.1	1,027.4	934.9	1,912.7	2,499.4	21.8	42.8	23,272.8
1978 <sup>c</sup>	561.5	121.0	837.5	688.1	6,302.4	8,439.6	1,032.0	943.5	1,983.1	2,542.3	22.5	43.6	23,517.0
1979 <sup>c</sup>	563.5	122.0	841.8	691.9	6,338.9	8,501.3	1,028.0	951.3	2,052.8	2,589.4	22.3	44.0	23,747.3
1980 <sup>c</sup>	565.6	122.8	845.1	695.4	6,386.1	8,569.7	1,024.9	959.4	2,140.6	2,666.0	22.3	44.7	24,042.5
1981	567.7	122.5	847.4	696.4	6,438.4	8,625.1	1,026.2	968.3	2,237.7	2,744.5	23.2	45.7	24,343.2
1982 <sup>c</sup>	569.2	122.8	852.2	699.1	6,482.4	8,715.8	1,035.2	979.4	2,317.0	2,790.1	23.7	47.2	24,634.2

c: Estimates referring to June 1 of given year.

2.7 Population of incorporated cities, towns and villages, by size group

Size group	1971			1976			1981		
	Incor- porated centres	Population	% of total popu- lation	Incor- porated centres	Population	% of total popu- lation	Incor- porated centres	Population	% of total popu- lation
Over 500,000	2	1,927,138	8.9	3	2,274,738	9.9	6	3,828,554	15.7
Between									
400,000 and 500,000	3	1,267,727	5.9	3	1,341,466	5.9	1	414,281	1.7
300,000 and 400,000	2	611,514	2.8	2	616,465	2.7	2	621,490	2.5
200,000 and 300,000	4	900,778	4.2	3	736,652	3.2	3	817,778	3.3
100,000 and 200,000	8	1,060,048	4.9	12	1,578,755	6.9	12	1,671,934	6.9
50,000 and 100,000	26	1,870,435	8.7	34	2,286,408	10.0	39	2,648,644	10.9
25,000 and 50,000	49	1,633,969	7.6	52	1,795,675	7.8	55	1,895,839	7.8
15,000 and 25,000	59	1,150,768	5.3	50	978,090	4.3	54	1,039,658	4.3
10,000 and 15,000	55	675,748	3.1	69	849,488	3.7	74	919,550	3.8
5,000 and 10,000	144	1,028,412	4.8	149	1,051,844	4.6	163	1,150,230	4.7
3,000 and 5,000	173	670,537	3.1	179	694,881	3.0	180	710,324	2.9
1,000 and 3,000	502	866,086	4.0	490	827,807	3.6	507	872,156	3.6
Under 1,000	1,093	451,810	2.1	1,033	419,078	1.8	1,027	434,314	1.8
Total	2,120	14,114,970	65.4	2,079	15,451,347	67.4	2,123	17,024,752	69.9

2.8 Population of incorporated cities and towns of 50,000 and over

Incorporated city or town	Year of incor- poration	1971	1976	1981
Beauport, Que.	1976	14,681*	55,339	60,447
Brampton, Ont.	1974	41,211	103,459	149,030
Brantford, Ont.	1877	64,421	66,950*	74,315*
Brossard, Que.	1958	23,452	37,641	52,232
Burlington, Ont.	1915	87,023	104,314*	114,853
Calgary, Alta.	1893	403,319*	469,917*	592,743*
Cambridge, Ont.	1973	64,794*	72,383	77,183
Charlesbourg, Que.	1976	33,443*	63,147	68,326
Chicoutimi, Que.	1976	33,893	57,737	60,064
Dartmouth, NS	1961	64,770	65,341	62,277
Edmonton, Alta.	1904	438,152*	461,361*	532,246*
Gatineau, Que.	1975	22,321*	73,479	74,988
Gloucester, Ont.	1981	37,145	56,516	72,859
Guelph, Ont.	1879	60,087*	67,538	71,207
Halifax, NS	1841	122,035*	117,882	114,594
Hamilton, Ont.	1846	309,173	312,003	306,434
Hull, Que.	1875	63,580*	61,039	56,225
Jonquière, Que.	1976	28,430*	60,691	60,354
Kamloops, BC	1973	26,168*	58,311	64,048

## 2.8 Population of incorporated cities and towns of 50,000 and over (concluded)

Incorporated city or town	Year of incorporation	1971	1976	1981
Kelowna, BC	1973	19,412*	51,955	59,196
Kingston, Ont.	1846	59,047	56,032	52,616
Kitchener, Ont.	1912	111,804*	131,870*	139,734
LaSalle, Que.	1958	72,912	76,713	76,299
Laval, Que.	1965	228,010	246,243	268,335
Lethbridge, Alta.	1906	41,217	46,752	54,072
London, Ont.	1855	223,222*	240,392	254,280
Longueuil, Que.	1920	97,590*	122,429	124,320
Markham, Ont.	1971	36,684*	56,206	77,037
Mississauga, Ont.	1968	156,070*	250,017*	315,056
Moncton, NB	1973	47,891	55,934	54,743
Montréal, Que.	1832	1,214,352*	1,080,546	980,354
Montréal N., Que.	1959	89,139*	97,250	94,914
Nepean, Ont.	1978	64,606	76,947	84,361*
Niagara Falls, Ont.	1903	67,163	69,423	70,960
North Bay, Ont.	1925	49,187*	51,639	51,268
North York, Ont.	1979	504,150	558,398	559,521
Oakville, Ont.	1857	61,483*	68,950*	75,773
Oshawa, Ont.	1924	91,587	107,023*	117,519
Ottawa, Ont.	1854	302,341	304,462	295,163
Peterborough, Ont.	1905	58,111*	59,683	60,620
Prince George, BC	1915	33,101*	59,929	67,559
Québec, Que.	1832	186,088*	177,082*	166,474
Regina, Sask.	1903	139,469*	149,593*	162,613
Sainte-Foy, Que.	1955	68,385*	71,237	68,883
Saint-Hubert, Que.	1958	21,741	49,706	60,573
Saint John, NB	1785	89,039*	85,956	80,521
Saint-Laurent, Que.	1955	62,955*	64,404	65,900
Saint-Léonard, Que.	1963	52,040*	78,452	79,429
St. Catharines, Ont.	1876	109,722*	123,351	124,018
St. John's, Nfld.	1888	88,102*	86,576*	83,770*
Sarnia, Ont.	1914	57,644	55,576	50,892
Saskatoon, Sask.	1906	126,449*	133,750	154,210
Sault Ste Marie, Ont.	1912	80,332	81,048	82,697
Sherbrooke, Que.	1875	80,711	76,804*	74,075
Sudbury, Ont.	1930	90,533	97,604*	91,829
Thunder Bay, Ont.	1970	108,411	111,476	112,486
Toronto, Ont.	1834	712,786*	633,318	599,217
Trois-Rivières, Que.	1857	55,869	52,518	50,466
Vancouver, BC	1886	426,256	410,188	414,281*
Verdun, Que.	1912	74,718	68,013	61,287
Victoria, BC	1862	61,761	62,551	64,379
Windsor, Ont.	1892	203,300*	196,526	192,083
Winnipeg, Man. <sup>1</sup>	1972	246,246	560,874*	564,473*

\*Indicates a boundary change since the preceding census. Population totals in these cases are based on a different area, the boundaries at that particular census year.

<sup>1</sup>Includes St. James-Assiniboia, Man.

## 2.9 Population of capital cities, selected census years

City	1961	1971	1976	1981
St. John's, Nfld.	63,633	88,102	86,576	83,770
Charlottetown, PEI	18,318	19,133	17,063	15,282
Halifax, NS	92,511	122,035	117,882	114,594
Fredericton, NB	19,683	24,254	45,248	43,723
Québec, Que.	171,979	186,088	177,082	166,474
Toronto, Ont.	672,407	712,786	633,318	599,217
Winnipeg, Man.	265,429	246,246	560,874	564,473
Regina, Sask.	112,141	139,469	149,593	162,613
Edmonton, Alta.	281,027	438,152	461,361	532,246
Victoria, BC	54,941	61,761	62,551	64,379
Whitehorse, YT	5,031	11,217	13,311	14,814
Yellowknife, NWT	<sup>1</sup>	6,122	8,256	9,483
Ottawa, Ont.	268,206	302,341	304,462	295,163

<sup>1</sup>Incorporated after June 1, 1961.

2.10 Population of census metropolitan areas, census years

Census metropolitan area	1961	1966	1971	1976 <sup>1</sup>	1981 <sup>1</sup>
Calgary	279,062	330,575	403,319	471,397 <sup>2</sup>	592,743
Chicoutimi-Jonquière	127,616	132,954	133,703	128,643	135,152
Edmonton	359,821	425,370	495,702	556,270 <sup>2</sup>	657,077
Halifax	193,353	209,901	222,637	267,991	277,727
Hamilton	401,071	457,410	498,523	529,371	542,095
Kitchener	154,864	192,275	226,846	272,158	287,801
London	226,669	253,701	286,011	270,383	283,668
Montréal	2,215,627	2,570,982	2,743,208	2,802,547 <sup>2</sup>	2,828,349
Oshawa	-	-	120,318 <sup>1</sup>	135,196	154,217
Ottawa-Hull	457,038	528,774	602,510	693,288	717,978
Québec	379,067	436,918	480,502	542,158	576,075
Regina	113,749	132,432	140,734	151,191	164,313
Saint John, NB	98,083	104,195	106,744	112,974	114,048
St. Catharines-Niagara	257,796	285,453	303,429	301,921	304,353
St. John's, Nfld.	106,666	117,533	131,814	145,400 <sup>2</sup>	154,820
Saskatoon	95,564	115,900	126,449	133,793 <sup>2</sup>	154,210
Sudbury	127,446	136,739	155,424	157,030	149,923
Thunder Bay	102,085	108,035	112,093	119,253	121,379
Toronto	1,919,409	2,289,900	2,628,043	2,803,101 <sup>2</sup>	2,998,947
Trois-Rivières	-	-	-	106,031	111,453
Vancouver	826,798	933,091	1,082,352	1,166,348	1,268,183
Victoria	155,763	175,262	195,800	218,250	233,481
Windsor	217,215	238,323	258,643	247,582	246,110
Winnipeg	476,543	508,759	540,262	578,217	584,842

<sup>1</sup>Based on 1981 census metropolitan area.

<sup>2</sup>Adjusted due to boundary changes.

2.11 Land area and population density, census years

Province or territory	Land area km <sup>2</sup>	Population per km <sup>2</sup>				
		1961	1966	1971	1976	1981
Newfoundland	371 635	1.24	1.33	1.41	1.51	1.5
Prince Edward Island	5 660	18.50	19.19	19.73	20.90	21.6
Nova Scotia	52 841	13.95	14.31	14.93	15.87	16.0
New Brunswick	71 569	8.29	8.56	8.80	9.39	9.7
Quebec	1 357 655	3.88	4.26	4.44	4.59	4.7
Ontario	916 734	7.00	7.81	8.64	9.27	9.4
Manitoba	547 704	1.68	1.76	1.80	1.86	1.9
Saskatchewan	570 113	1.62	1.68	1.63	1.62	1.7
Alberta	638 233	2.07	2.27	2.53	2.85	3.5
British Columbia	892 677	1.75	2.02	2.35	2.65	3.1
Canada (excl. the territories)	5 424 821	3.34	3.67	3.95	4.21	4.5
Yukon	531 844	0.03	0.03	0.03	0.04	0.04
Northwest Territories	3 246 389	0.01	0.01	0.01	0.01	0.01
Canada	9 203 054	1.98	2.17	2.34	2.49	2.6

2.12 Urban and rural population, Canada and provinces, 1981

Province or territory	Urban		Rural						Total population No.
			Non-farm		Farm		Total		
	No.	%	No.	%	No.	%	No.	%	
Newfoundland	332,898	58.6	232,858	41.0	1,925	0.4	234,783	41.4	567,681
Prince Edward Island	44,515	36.3	65,976	53.9	12,015	9.8	77,991	63.7	122,506
Nova Scotia	466,842	55.1	362,919	42.8	17,681	2.1	380,600	44.9	847,442
New Brunswick	353,220	50.6	328,211	47.1	14,972	2.2	343,183	49.3	696,403
Quebec	4,993,839	77.6	1,258,202	19.5	186,362	2.9	1,444,564	22.4	6,438,403
Ontario	7,047,032	81.7	1,298,249	15.1	279,826	3.2	1,578,075	18.3	8,625,107
Manitoba	730,659	71.2	199,188	19.4	96,394	9.4	295,582	28.8	1,026,241
Saskatchewan	563,166	58.1	224,892	23.2	180,255	18.6	405,147	41.8	968,313
Alberta	1,727,545	77.2	319,424	14.3	190,755	8.5	510,179	22.8	2,237,724
British Columbia	2,139,412	78.0	545,400	19.9	59,655	2.2	605,055	22.1	2,744,467
Yukon	14,814	64.0	8,335	36.0	4	—	8,339	36.0	23,153
Northwest Territories	21,985	48.1	23,749	51.9	7	—	23,756	51.9	45,741
Canada	18,435,927	75.8	4,867,403	20.0	1,039,851	4.3	5,907,254	24.3	24,343,181

2.13 Population by sex distribution and ratios

Province or territory	Population, 1981		Males to 100 females		
	Male	Female	1971	1976	1981
Newfoundland	285,690	281,990	103.9	103.3	101.3
Prince Edward Island	60,940	61,570	101.5	100.7	99.0
Nova Scotia	419,575	427,870	101.0	99.9	98.1
New Brunswick	346,000	350,400	101.4	100.4	98.7
Quebec	3,172,195	3,266,205	98.7	97.9	97.1
Ontario	4,246,790	4,378,320	99.4	98.3	97.0
Manitoba	506,510	519,730	100.2	98.9	97.5
Saskatchewan	486,075	482,235	103.3	101.8	100.8
Alberta	1,143,220	1,094,505	103.5	102.9	104.5
British Columbia	1,365,155	1,379,310	101.5	99.9	99.0
Yukon	12,175	10,975	117.2	115.4	110.9
Northwest Territories	23,965	21,775	110.6	111.3	110.1
Canada	12,068,290	12,274,895	100.2	99.2	98.3

2.14 Population by age distribution

Age group	Number			Percentage		
	1981	1971	1976	1981	1971	1976
0- 4 years	1,816,155	1,731,995	1,783,370	8.4	7.5	7.3
5- 9 "	2,254,005	1,887,805	1,776,860	10.5	8.2	7.3
10-14 "	2,310,740	2,276,375	1,920,870	10.7	9.9	7.9
15-19 "	2,114,345	2,345,255	2,314,885	9.8	10.2	9.5
20-24 "	1,889,400	2,133,805	2,343,810	8.8	9.3	9.6
25-29 "	1,584,125	1,993,060	2,177,610	7.3	8.7	8.9
30-34 "	1,305,425	1,627,485	2,038,580	6.1	7.1	8.4
35-39 "	1,263,870	1,328,790	1,630,250	5.9	5.8	6.7
40-44 "	1,262,530	1,268,220	1,337,905	5.9	5.5	5.5
45-49 "	1,239,040	1,252,845	1,255,355	5.7	5.4	5.2
50-54 "	1,052,540	1,220,180	1,243,480	4.9	5.3	5.1
55-59 "	954,725	1,019,035	1,179,915	4.4	4.4	4.8
60-64 "	777,020	905,400	979,315	3.6	3.9	4.0
65-69 "	619,960	720,815	844,330	2.9	3.1	3.5
70-74 "	457,380	533,725	633,415	2.1	2.3	2.6
75-79 "	325,510	362,705	432,655	1.5	1.6	1.8
80-84 "	204,170	220,560	256,790	0.9	1.0	1.1
85 years and over	137,390	164,540	193,785	0.6	0.7	0.8
Total	21,568,310	22,992,605	24,343,180	100.0	100.0	100.0

2.15 Estimated population by age group and sex (thousands)

Province or territory	Age group and sex, June 1, 1982 <sup>P</sup>							
	0-4 years		5-9 years		10-14 years		15-19 years	
	Male	Female	Male	Female	Male	Female	Male	Female
Newfoundland	24.9	23.8	28.2	26.5	31.2	29.6	31.7	30.9
Prince Edward Island	4.9	4.7	5.1	4.7	5.6	5.3	6.3	6.1
Nova Scotia	30.6	29.7	33.1	31.3	36.7	34.7	42.5	40.2
New Brunswick	27.0	25.5	29.3	28.1	31.8	29.8	36.0	34.2
Quebec	243.7	230.0	228.9	217.5	238.4	226.7	303.5	290.8
Ontario	305.8	291.6	312.6	296.7	343.7	325.8	402.3	382.8
Manitoba	40.0	37.9	40.2	37.9	41.9	40.2	47.4	46.1
Saskatchewan	42.4	40.1	39.8	38.4	40.8	38.6	47.0	45.0
Alberta	100.3	94.5	91.1	87.0	92.5	87.7	108.7	102.5
British Columbia	100.0	95.7	96.6	91.7	106.1	100.9	119.2	113.9
Yukon	1.2	1.1	1.0	0.9	1.1	1.0	1.2	1.0
Northwest Territories	2.9	2.8	2.5	2.4	2.7	2.6	2.7	2.5
Canada	923.7	877.4	908.3	863.2	972.6	922.8	1,148.5	1,096.0

2.15 Estimated population by age group and sex (thousands) (concluded)

Province or territory	Age group and sex, June 1, 1982 <sup>D</sup>							
	20-24 years		25-34 years		35-44 years		45-54 years	
	Male	Female	Male	Female	Male	Female	Male	Female
Newfoundland	25.1	25.9	46.8	47.6	32.8	31.7	23.8	22.6
Prince Edward Island	5.2	5.3	9.4	9.6	7.1	6.8	5.6	5.4
Nova Scotia	39.8	39.5	69.7	70.7	51.4	50.9	39.8	40.2
New Brunswick	32.3	32.2	58.0	58.9	41.6	40.4	30.9	31.7
Quebec	321.7	319.6	576.3	579.4	431.7	432.8	334.5	345.8
Ontario	400.0	401.8	718.0	745.2	566.9	564.4	472.1	465.2
Manitoba	47.7	47.4	83.5	84.4	59.5	59.1	49.2	49.6
Saskatchewan	45.3	44.7	78.1	75.3	51.3	50.1	46.3	45.4
Alberta	140.0	131.3	242.9	220.2	145.1	135.2	108.3	99.9
British Columbia	126.9	127.0	248.2	248.6	184.8	177.7	145.2	136.6
Yukon	1.2	1.3	2.7	2.7	1.9	1.6	1.1	0.8
Northwest Territories	2.6	2.4	4.8	4.5	2.9	2.4	1.8	1.5
Canada	1,187.6	1,178.4	2,138.4	2,147.1	1,577.2	1,552.9	1,258.6	1,244.7
	55-64 years		65-69 years		70+ years		All ages	
	Male	Female	Male	Female	Male	Female	Male	Female
Newfoundland	20.7	20.1	8.1	8.7	13.2	16.5	286.0	283.2
Prince Edward Island	5.0	5.5	2.3	2.6	4.5	6.0	61.0	61.8
Nova Scotia	36.3	40.0	15.7	17.8	26.8	37.3	421.4	430.9
New Brunswick	28.5	31.0	11.9	13.0	20.4	28.4	347.0	352.1
Quebec	270.6	303.8	96.1	118.3	151.3	236.8	3,191.2	3,291.3
Ontario	396.1	431.9	142.6	167.2	237.7	368.4	4,288.9	4,426.8
Manitoba	46.8	51.9	19.7	22.6	35.5	49.5	510.4	524.8
Saskatchewan	44.9	46.7	19.3	20.9	36.7	45.0	491.0	488.4
Alberta	79.1	81.9	27.6	31.3	50.1	64.1	1,184.2	1,132.8
British Columbia	124.3	137.8	51.0	59.3	88.5	119.5	1,387.1	1,403.0
Yukon	0.7	0.5	0.2	0.1	0.2	0.2	12.5	11.3
Northwest Territories	1.0	0.8	0.3	0.2	0.5	0.4	24.8	22.4
Canada	1,054.1	1,151.9	395.0	462.1	665.4	972.1	12,055.5	12,428.8

2.16 Marital status of the population, 1981

Age group	Sex	Single	Married	Widowed	Divorced	Total
0-14 years	M	2,811,130	—	—	—	2,811,130
	F	2,669,975	—	—	—	2,669,970
	T	5,481,100	—	—	—	5,481,100
15-19 years	M	1,163,365	18,120	315	210	1,182,015
	F	1,057,505	74,360	600	400	1,132,870
	T	2,220,870	92,480	920	615	2,314,885
20-24 years	M	844,545	326,060	430	3,255	1,174,295
	F	597,830	561,280	1,350	9,055	1,169,520
	T	1,442,380	887,345	1,780	12,310	2,343,810
25-29 years	M	347,005	719,435	640	17,330	1,084,410
	F	218,305	839,640	3,225	32,025	1,093,200
	T	565,315	1,559,080	3,860	49,355	2,177,610
30-39 years	M	229,685	1,553,130	3,045	57,920	1,843,780
	F	165,390	1,551,155	15,065	93,440	1,825,050
	T	395,075	3,104,285	18,110	151,360	3,668,830
40-49 years	M	99,740	1,150,450	8,185	51,000	1,309,375
	F	76,320	1,095,295	40,035	72,235	1,283,880
	T	176,060	2,245,740	48,220	123,235	2,593,255
50 years and over	M	214,145	2,189,100	186,915	73,130	2,663,290
	F	241,265	1,871,135	897,865	90,135	3,100,400
	T	455,415	4,060,230	1,084,780	163,260	5,763,685
Total	M	5,709,625	5,956,290	199,535	202,840	12,068,285
	F	5,026,590	5,992,875	958,135	297,290	12,274,895
	T	10,736,215	11,949,165	1,157,670	500,135	24,343,180

2.17 Population by mother tongue and home language

Language <sup>1</sup>	Mother tongue				Home language	
	1976		1981		1981 <sup>2</sup>	
	No.	%	No.	%	No.	%
English	14,122,770	61.42	14,918,460	61.28	16,425,905	68.20
French	5,887,205	25.60	6,249,095	25.67	5,923,010	24.59
Non-official languages	2,537,610	11.04	3,175,625	13.05	1,734,580	7.20
European languages	2,101,150	9.14	2,444,450	10.04	1,170,335	4.86
Croatian, Serbian, etc.	77,575	0.34	87,870	0.36	53,460	0.22
Czech and Slovak	34,955	0.15	42,825	0.18	18,970	0.08
Finnish	28,470	0.12	33,380	0.14	13,010	0.05
German	476,715	2.07	522,855	2.15	163,555	0.68
Greek	91,530	0.40	122,960	0.51	94,940	0.39
Italian	484,050	2.11	528,775	2.17	364,575	1.51
Magyar (Hungarian)	69,300	0.30	83,720	0.34	34,235	0.14
Netherlandic languages	122,555	0.53	156,640	0.64	26,850	0.11
Dutch and Frisian	114,760	0.50	146,830	0.60	24,690	0.10
Polish	99,845	0.43	127,960	0.53	55,715	0.23
Portuguese	126,535	0.55	165,510	0.68	130,895	0.54
Russian	23,485	0.10	31,490	0.13	13,790	0.06
Scandinavian languages	59,410	0.26	67,725	0.28	7,730	0.03
Spanish	44,135	0.19	70,160	0.29	51,440	0.21
Ukrainian	282,060	1.23	292,265	1.20	94,655	0.39
Yiddish	23,435	0.10	32,760	0.14	10,635	0.04
Asian languages	255,380	1.11	555,145	2.28	435,555	1.81
Armenian	10,335	0.04	17,140	0.07	15,865	0.07
Chinese	132,560	0.58	224,030	0.92	187,240	0.78
Indo-Chinese languages	..	..	41,615	0.17	39,210	0.16
Vietnamese	..	..	30,105	0.12	28,890	0.12
Indo-Pakistani languages	58,415	0.25	116,990	0.48	95,075	0.40
Punjabi	..	..	53,680	0.22	47,655	0.20
Japanese	15,525	0.07	20,130	0.08	10,845	0.04
Korean	..	..	17,100	0.07	14,440	0.06
Filipino and Tagalog	..	..	44,865	0.18	32,285	0.13
Semitic languages	37,100	0.16	58,900	0.24	32,120	0.13
Arabic	..	..	50,115	0.21	27,905	0.12
African Languages	..	..	3,270	0.01	1,465	0.01
North American languages	133,005	0.58	146,290	0.60	107,220	0.45
Native Indian languages	117,105	0.51	127,450	0.52	92,200	0.38
Algonkian languages	..	..	102,905	0.42	77,995	0.32
Cree	..	..	67,495	0.28	51,555	0.21
Ojibway	..	..	19,770	0.08	13,940	0.06
Athapaskan languages	..	..	11,665	0.05	8,620	0.04
Inuktituk	15,900	0.07	18,840	0.08	17,020	0.07
Indian, not otherwise specified	..	..	20,285	0.08	10,730	0.04
Other	48,065	0.21	6,185	0.03	7,725	0.03
Not stated	445,020	1.94	..	..	..	..
Total <sup>1</sup>	22,992,605	100.00	24,343,180	100.00	24,083,495	100.00

<sup>1</sup>Some smaller language groups are not shown in this table, because of this and random rounding, totals may not equal the sum of components.

<sup>2</sup>Mother tongue figures are based on 100% data while those for home language are based on a 20% sample and exclude inmates in institutions.

2.18 Distribution of the population<sup>1</sup> by mother tongue

Province or territory	1976				1981		
	English	French	Other	Not stated	English	French	Other
Newfoundland	545,340	2,760	3,965	5,665	560,460	2,655	4,560
Prince Edward Island	109,745	6,545	935	1,005	115,045	6,080	1,380
Nova Scotia	768,070	36,870	13,625	10,010	793,165	36,030	18,250
New Brunswick	435,975	223,780	6,925	10,565	453,310	234,030	9,060
Quebec	800,680	4,989,245	334,055	110,470	706,115	5,307,010	425,280
Ontario	6,457,645	462,070	1,178,670	166,080	6,678,770	475,605	1,470,735
Manitoba	727,240	54,745	218,875	20,645	735,920	52,560	237,760
Saskatchewan	715,685	26,710	163,935	14,995	770,815	25,535	171,955
Alberta	1,482,725	44,440	272,395	38,480	1,810,545	62,145	365,035
British Columbia	2,037,645	38,430	325,610	64,930	2,249,310	45,615	449,540
Yukon	18,940	525	1,630	745	20,245	580	2,325
Northwest Territories	23,085	1,095	16,995	1,435	24,755	1,240	19,745
Canada	14,122,770	5,887,205	2,537,615	445,020	14,918,460	6,249,095	3,175,625

<sup>1</sup>Based on 100% data.

## 2.19 Population<sup>1</sup> by official languages, 1981 Census

Province or territory	English only		French only		English and French		Neither English nor French	
	No.	%	No.	%	No.	%	No.	%
Newfoundland	550,335	97.6	145	0.0	12,840	2.3	430	0.1
Prince Edward Island	111,205	91.7	200	0.2	9,780	8.1	40	0.0
Nova Scotia	774,760	92.3	1,880	0.2	62,350	7.4	805	0.1
New Brunswick	417,030	60.5	89,340	13.0	182,555	26.5	455	0.1
Quebec	426,240	6.7	3,826,610	60.1	2,065,100	32.4	51,120	0.8
Ontario	7,401,070	86.7	60,530	0.7	924,480	10.8	148,185	1.7
Manitoba	915,755	90.3	2,620	0.3	79,990	7.9	15,340	1.5
Saskatchewan	904,900	94.6	705	0.1	43,650	4.6	7,180	0.8
Alberta	2,045,060	92.4	3,705	0.2	142,465	6.4	22,425	1.0
British Columbia	2,518,965	92.8	1,445	0.1	154,170	5.7	39,030	1.4
Yukon	21,200	91.9	10	0.0	1,820	7.9	45	0.2
Northwest Territories	36,380	79.9	60	0.1	2,750	6.0	6,340	13.9
Canada	16,122,900	67.0	3,987,240	16.6	3,681,960	15.3	291,395	1.2

<sup>1</sup>These figures are based on 20% sample data and exclude inmates in institutions.

## 2.20 Population by selected ethnic origins, 1981 Census<sup>1</sup>

Ethnic group	Province or territory					
	Nfld.	PEI	NS	NB	Que.	Ont.
Single origins	547,640	112,545	767,205	649,420	6,241,115	7,751,615
African	85	20	3,900	240	6,220	24,895
Armenian	5	—	20	5	10,385	9,665
Asian Arab	190	245	2,880	705	16,850	26,330
Austrian	30	15	250	105	2,275	15,145
Balkans	115	10	360	150	6,875	90,975
Baltic	45	20	425	100	4,665	35,600
Belgian and Luxembourg	10	145	465	235	6,585	18,035
British	519,620	93,345	608,685	369,125	487,385	4,487,800
Czech and Slovak	40	25	410	185	4,845	33,025
Chinese	635	165	1,545	880	19,225	118,640
Dutch	675	1,340	13,495	4,400	8,055	191,125
Finnish	70	5	260	95	1,140	33,395
French	15,355	14,770	71,350	251,070	5,105,665	652,900
German	1,640	820	33,145	6,490	33,770	373,390
Greek	30	—	1,695	360	49,420	85,960
Magyar (Hungarian)	15	50	470	360	9,745	59,135
Indochinese	75	45	400	525	15,130	12,815
Indo-Pakistani	730	75	1,690	720	14,150	93,945
Italian	410	100	3,235	1,145	163,735	487,310
Japanese	25	5	40	30	1,395	16,685
Jewish	285	80	2,090	720	90,355	131,320
Latin American	85	20	690	125	26,315	74,250
Native Peoples	3,225	435	6,305	4,605	46,855	83,860
North African Arab	5	—	20	35	6,090	3,535
Pacific Islands	320	5	310	180	4,535	36,600
Polish	180	50	490	315	19,755	122,945
Portuguese	245	50	490	315	27,370	129,005
Romanian	—	—	155	50	2,790	8,170
Russian	35	10	155	65	2,940	8,715
Scandinavian	640	250	2,175	2,345	4,225	40,335
Spanish	180	5	400	255	15,460	25,185
Swiss	10	15	440	95	4,320	11,755
Ukrainian	135	105	1,965	635	14,640	133,995
West Asian	15	—	135	—	1,605	5,445
Other single origins	2,455	280	4,690	2,660	6,315	69,700
Multiple origins	16,110	8,680	72,595	39,950	127,960	782,650
British and French	10,245	5,305	27,650	22,820	62,270	201,415
British and other	3,485	2,440	29,995	11,170	20,645	375,800
French and other	350	225	3,570	1,910	21,790	45,145
British, French and other	500	370	4,735	2,100	7,120	50,110
European and other <sup>2</sup>	330	145	5,160	1,040	10,585	83,985
Native peoples and other <sup>3</sup>	1,200	190	1,485	910	5,540	26,200
Total <sup>4</sup>	563,750	121,225	839,805	689,375	6,369,065	8,534,265

2.20 Population by selected ethnic origins, 1981 Census<sup>1</sup> (concluded)

Ethnic group	Province or territory						
	Man.	Sask.	Alta.	BC	YT	NWT	Canada
Single origins	912,360	853,315	1,940,915	2,407,045	19,580	42,125	22,244,885
African	1,590	500	4,285	3,445	20	25	45,215
Armenian	10	10	215	840	—	—	21,155
Asian Arab	885	785	8,285	2,970	—	15	60,140
Austrian	3,155	4,115	6,400	9,025	60	45	40,630
Balkans	3,135	1,880	9,340	15,910	60	85	129,075
Baltic	1,275	435	3,020	4,580	90	30	50,300
Belgian and Luxembourg	6,500	2,830	4,305	3,830	20	35	43,000
British	373,995	366,080	962,785	1,385,165	10,060	10,200	9,674,245
Czech and Slovak	3,590	3,725	11,195	10,470	110	75	67,695
Chinese	7,065	6,970	36,770	96,915	215	200	289,245
Dutch	33,875	17,215	65,060	72,280	400	315	408,240
Finnish	1,060	1,275	4,135	10,810	30	45	52,315
French	74,050	46,915	111,865	92,310	1,080	1,765	6,439,100
German	108,140	161,700	233,175	187,630	1,300	1,160	1,142,365
Greek	2,380	1,220	4,820	8,390	30	65	154,365
Magyar (Hungarian)	4,160	11,080	15,170	15,920	190	100	116,390
Indochinese	2,020	1,865	6,385	4,410	15	35	43,725
Indo-Pakistani	5,055	2,200	21,440	56,215	90	55	196,395
Italian	9,595	2,755	26,605	52,769	95	220	747,970
Japanese	1,300	205	5,225	16,040	30	10	40,995
Jewish	14,950	1,515	9,460	13,170	25	55	264,025
Latin American	3,695	975	6,845	4,525	10	25	117,555
Native Peoples	59,925	54,720	60,010	64,690	3,415	25,325	413,380
North African Arab	125	60	490	185	—	5	10,545
Pacific Islands	11,740	1,040	8,430	17,050	5	120	80,340
Polish	28,445	18,335	37,655	23,795	190	205	254,485
Portuguese	7,830	515	6,125	16,125	5	30	188,105
Romanian	900	3,905	3,805	2,650	35	25	22,485
Russian	3,765	6,290	7,715	19,605	50	75	49,435
Scandinavian	25,170	42,720	78,565	85,035	745	595	282,795
Spanish	1,470	730	4,945	4,845	25	40	53,540
Swiss	870	1,225	4,680	6,335	25	40	29,805
Ukrainian	99,795	76,815	136,710	63,605	635	580	529,615
West Asian	120	65	895	1,770	—	10	10,055
Other single origins	10,545	10,645	34,105	33,740	520	515	176,160
Multiple origins	101,345	103,120	272,735	306,570	3,490	3,415	1,838,615
British and French	12,400	9,095	34,995	42,955	20	565	430,255
British and other	46,485	52,985	142,930	171,195	1,560	1,110	859,800
French and other	8,820	8,325	19,185	15,290	165	175	124,940
British, French and other	4,320	4,425	15,585	17,475	210	135	107,080
European and other <sup>2</sup>	22,965	23,820	48,005	41,705	385	325	238,455
Native peoples and other <sup>3</sup>	6,355	4,480	12,045	17,950	630	1,100	78,085
Total <sup>4</sup>	1,013,705	956,440	2,213,650	2,713,615	23,075	45,540	24,083,500

<sup>1</sup>The 1981 Census is the first to accept more than one ethnic origin for an individual. Therefore, this table includes counts of single and multiple origins.  
<sup>2</sup>Includes multiple origins involving European, Jewish and other origins not included elsewhere.  
<sup>3</sup>Includes multiple origins involving Native Peoples and British, French, European, Jewish or other origins.  
<sup>4</sup>These figures are based on 20% sample data and exclude inmates in institutions.

2.21 Principal religious denominations, 1981

Denomination	Total	%	Denomination	Total	%
Catholic <sup>1</sup>	11,402,605	47.3	Presbyterian	812,110	3.4
Roman Catholic	11,210,385	46.5	Reformed bodies	104,175	0.4
Ukrainian Catholic	190,585	0.8	Canadian Reformed Church	10,560	—
Protestant	9,914,580	41.2	Christian Reformed	77,370	0.3
Adventist	41,605	0.2	Salvation Army	125,085	0.5
Anglican	2,436,375	10.1	Unitarian	14,500	0.1
Associated Gospel	7,805	—	United Church	3,758,015	15.6
Baptist	696,850	2.9	Wesleyan	7,770	—
Brethren in Christ	22,260	0.1	Worldwide Church of God	8,130	—
Christian and Missionary Alliance	33,895	0.1	Other Protestant	245,550	1.0
Church of God	10,040	—	Eastern Orthodox <sup>3</sup>	361,565	1.5
Churches of Christ, Disciples	15,350	0.1	Greek Orthodox	314,870	1.3
Church of the Nazarene	13,360	0.1	Jewish	296,425	1.2
Doukhobors <sup>2</sup>	6,700	—	Eastern Non-Christian	305,885	1.3
Evangelical Free Church	5,780	—	Bahai	7,955	—
Hutterite	16,530	0.1	Buddhist	51,955	0.2
Jehovah's Witnesses	143,485	0.6	Hindu	69,500	0.3
Latter Day Saints	89,865	0.4	Islam	98,165	0.4
Church of Latter Day Saints	82,060	0.3	Sikh	67,710	0.3
Reorganized Church of					
Latter Day Saints	7,810	—			
Lutheran	702,905	2.9			

## 2.21 Principal religious denominations, 1981 (concluded)

Denomination	Total	%	Denomination	Total	%
Mennonite	189,370	0.8	Para-religious groups <sup>4</sup>	13,445	0.1
Methodist bodies	47,840	0.2	Non-religious groups <sup>5</sup>	1,788,995	7.4
Evangelical	19,030	0.1	Agnostic	10,770	—
Free Methodist	12,270	0.1	Atheist	4,455	—
Missionary Church	7,940	—	No religion	1,752,385	7.3
Moravian	4,350	—			
Pentecostal	338,790	1.4	Total non-inmate population	24,083,495	100.0
Plymouth Brethern	8,060	—			

<sup>1</sup>Includes Roman Catholic, Ukrainian Catholic and Polish National Catholic Church.

<sup>2</sup>Includes both Orthodox and Reformed Doukhobors, the latter however constitutes less than 1.2% of the total group.

<sup>3</sup>Eastern Orthodox includes Greek Orthodox as well as a number of other nationally identified Orthodox groups such as Antiochian, Armenian, Romanian, Servian, Ukrainian and Russian.

<sup>4</sup>Para-religious groups include expressly identified groups such as Fourth Way, New Thought, Theosophical, Pagan and a number of other diverse groups such as PSI, EST, The Farm, categorized as "other para-religious".

<sup>5</sup>Non-religious groups include in addition to Agnostic, Atheist and No Religion, respondent entries that indicate no religious preference. This category also includes "other (entries) not elsewhere classified".

## 2.22 Population by country of birth

Country of birth	1961		1971		1981	
	No.	%	No.	%	No.	%
Canada	15,393,984	84.4	18,272,780	84.7	20,216,335	83.9
United Kingdom	969,715	5.3	933,040	4.3	884,915	3.7
Other Commonwealth countries	47,887	0.3	170,105	0.8	393,875	1.6
United States	283,908	1.6	309,640	1.4	312,015	1.3
European countries	1,468,058	8.0	1,684,515	7.8	1,690,580	7.0
Germany	189,131	1.0	211,060	1.0	198,215	0.8
Italy	258,071	1.4	385,755	1.8	386,505	1.6
Netherlands	135,033	0.7	133,525	0.6	158,755	0.6
Poland	171,467	0.9	160,040	0.7	148,935	0.6
USSR	186,653	1.0	160,120	0.7	128,680	0.6
Other	527,703	2.9	634,015	2.9	689,490	2.9
Asiatic countries	57,761	0.3	119,435	0.6	412,620	1.7
Other	16,934	0.1	78,795	0.4	173,155	0.7
Total	18,238,247	100.0	21,568,310	100.0	24,083,495	100.0

## 2.23 Native peoples of Canada,<sup>1</sup> 1981 Census

Province or territory	Inuit	Status Indian	Non-status Indian	Métis	Total native peoples
Newfoundland	1,850	1,010	1,185	385	4,430
Prince Edward Island	30	400	140	50	625
Nova Scotia	130	5,905	1,155	605	7,795
New Brunswick	5	4,235	865	415	5,515
Quebec	4,875	34,400	5,810	7,310	52,395
Ontario	1,095	70,190	26,090	12,680	110,060
Manitoba	230	39,710	5,855	20,485	66,280
Saskatchewan	145	37,470	4,135	17,455	59,200
Alberta	510	35,810	8,595	27,135	72,050
British Columbia	515	54,085	19,085	8,955	82,645
Yukon	95	2,770	990	190	4,045
Northwest Territories	15,910	6,720	1,205	2,595	26,430
Canada	25,390	292,700	75,110	98,260	491,460

<sup>1</sup>These figures are based on 20% sample data and exclude inmates in institutions.

## 2.24 Indian bands and registered population, by type of residence

Year <sup>1</sup> and province or territory	Number of bands <sup>2</sup>	Registered band membership			
		On reserves	Off reserves	Crown land	Total
1980					
Prince Edward Island	2	339	192	14	545
Nova Scotia	12	4,244	1,599	19	5,862
New Brunswick	15	4,159	1,259	54	5,472
Quebec	39	22,068	6,081	5,456	33,605
Ontario	115	44,374	22,410	1,942	68,726
Manitoba	59	31,907	12,689	2,737	47,333
Saskatchewan	68	31,356	15,977	969	48,302
Alberta	41	26,741	9,459	2,145	38,345
British Columbia	195	34,879	22,341	539	57,759
Yukon	13	76	692	2,121	2,889
Northwest Territories	16	32	380	7,487	7,899
Canada, 1980	575	200,175	93,079	23,483	316,737
1981					
Prince Edward Island	2	341	214	1	556
Nova Scotia	12	4,413	1,571	21	6,005
New Brunswick	15	4,251	1,310	16	5,577
Quebec	39	22,659	6,137	5,206	34,002
Ontario	115	44,472	23,454	2,314	70,240
Manitoba	59	32,477	13,388	2,822	48,687
Saskatchewan	68	31,300	16,999	1,071	49,370
Alberta	41	27,701	9,590	2,165	39,456
British Columbia	196	35,781	22,359	746	58,886
Yukon	13	105	689	2,134	2,928
Northwest Territories	16	17	579	7,479	8,075
Canada, 1981	576	203,517	96,290	23,975	323,782

<sup>1</sup>At December 31.

<sup>2</sup>Bands whose members were known to reside in more than one province or territory were allocated to that province or territory in which the majority was known to reside.

## 2.25 Private households and average number of persons per household

Province or territory	Private households				Average persons per household		
	1971 <sup>1</sup>	1976	1981	% increase 1976-81	1971	1976	1981
Newfoundland	110,475	131,665	148,420	12.7	4.6	4.1	3.8
Prince Edward Island	27,895	32,930	37,660	14.4	3.9	3.5	3.2
Nova Scotia	208,425	243,110	273,190	12.4	3.7	3.3	3.0
New Brunswick	158,100	190,435	214,920	12.9	3.9	3.5	3.2
Quebec	1,605,750	1,894,110	2,172,855	14.7	3.7	3.2	2.9
Ontario	2,228,160	2,634,620	2,969,785	12.7	3.4	3.1	2.8
Manitoba	288,720	328,005	357,985	9.1	3.3	3.0	2.8
Saskatchewan	267,845	291,155	332,710	14.3	3.4	3.1	2.8
Alberta	464,945	575,280	758,240	31.8	3.4	3.1	2.9
British Columbia	668,305	828,285	996,640	20.3	3.2	2.9	2.7
Yukon	5,103	6,495	7,600	17.0	3.4	3.2	2.9
Northwest Territories	7,585	10,020	11,520	15.0	4.4	4.1	3.8
Canada	6,041,305	7,166,095	8,281,530	15.6	3.5	3.1	2.9

<sup>1</sup>1971 counts of private households include households outside Canada.

2.26 Private households by type

Type of household	Number			Percentage of total households		
	1971 <sup>1</sup>	1976	1981	1971	1976	1981
Family households	4,933,450	5,633,945	6,231,490	81.7	78.6	75.2
One-family households	4,812,360	5,542,295	6,140,330	79.7	77.3	74.1
Primary-family households <sup>2</sup>	4,773,900	5,513,765	6,043,735	79.0	76.9	73.0
Without additional persons	4,285,960	5,025,815	5,556,385	70.9	70.1	67.1
With additional persons	487,935	487,950	487,350	8.1	6.8	5.9
Secondary-family households <sup>2</sup>	38,465	28,525	96,590	0.6	0.4	1.2
Multiple family households <sup>3</sup>	121,085	91,650	91,155	2.0	1.3	1.1
Non-family households	1,107,855	1,532,150	2,050,045	18.3	21.4	24.8
One person only	811,835	1,205,340	1,681,130	13.4	16.8	20.3
Two or more persons	296,020	326,810	368,910	4.9	4.6	4.5
Total households	6,041,300	7,166,095	8,281,530	100.0	100.0	100.0

<sup>1</sup>1971 counts include households outside Canada.  
<sup>2</sup>Changes in the 1981 Census method of determining primary and secondary-census families affect the historical comparability and counts of these types of one-family households.  
<sup>3</sup>Consists of two or more families in one dwelling.

2.27 Household maintainers by age groups, 1981

Province or territory	Under 25 years	25-34 years	35-44 years	45-54 years	55-64 years	65 years and over	Total
Newfoundland	8,425	39,490	30,245	24,385	22,565	23,305	148,420
Prince Edward Island	2,320	8,495	6,765	5,735	5,795	8,550	37,660
Nova Scotia	19,585	63,395	49,490	41,740	42,820	56,160	273,195
New Brunswick	15,300	52,695	39,720	32,755	33,120	41,340	214,920
Quebec	168,365	548,285	445,685	374,395	319,225	316,905	2,172,860
Ontario	209,585	699,995	575,620	514,355	451,435	518,785	2,969,785
Manitoba	31,890	80,980	59,630	53,845	55,380	76,260	357,985
Saskatchewan	34,325	73,325	50,040	49,570	51,755	73,700	332,710
Alberta	98,815	218,510	140,815	114,215	88,365	97,520	758,240
British Columbia	84,010	244,420	187,065	156,925	143,670	180,550	996,645
Yukon	830	2,675	1,790	1,125	720	460	7,600
Northwest Territories	1,365	4,105	2,550	1,745	1,040	715	11,515
Canada	674,830	2,036,370	1,589,415	1,370,800	1,215,895	1,394,230	8,281,530

2.28 Household maintainers by marital status, 1981

Province or territory	Married <sup>1</sup>	Widowed	Divorced	Single (never married)	Total
Newfoundland	121,470	14,230	2,615	10,110	148,420
Prince Edward Island	27,915	4,615	1,015	4,110	37,660
Nova Scotia	197,385	33,960	11,630	30,220	273,190
New Brunswick	162,745	24,315	6,870	20,990	214,920
Quebec	1,546,115	207,425	106,475	312,850	2,172,855
Ontario	2,164,670	315,500	130,835	358,780	2,969,785
Manitoba	249,360	42,730	14,490	51,410	357,985
Saskatchewan	234,845	39,035	10,800	48,035	332,715
Alberta	536,805	56,570	43,845	121,025	758,240
British Columbia	698,305	96,125	61,965	140,255	996,640
Yukon	5,435	350	415	1,400	7,600
Northwest Territories	8,530	635	395	1,955	11,520
Canada	5,953,575	835,490	391,340	1,101,120	8,281,530

<sup>1</sup>Includes separated.

2.29 Families and persons per family

Province or territory	Families		Persons in families		Average number of persons per family	
	1976	1981	1976	1981	1976	1981
Newfoundland	124,655	135,150	502,700	509,545	4.0	3.8
Prince Edward Island	27,560	30,220	102,700	105,745	3.7	3.5
Nova Scotia	200,480	216,200	710,360	721,035	3.5	3.3
New Brunswick	162,030	176,565	594,705	605,190	3.7	3.4
Quebec	1,540,400	1,671,540	5,434,790	5,491,195	3.5	3.3
Ontario	2,104,545	2,278,970	7,124,635	7,348,510	3.4	3.2
Manitoba	251,975	262,190	859,575	851,310	3.4	3.2
Saskatchewan	225,685	245,670	783,810	809,945	3.5	3.3
Alberta	448,770	565,635	1,556,005	1,842,430	3.5	3.3
British Columbia	628,445	727,680	2,060,325	2,261,040	3.3	3.1
Yukon	4,930	5,675	17,420	18,510	3.5	3.3
Northwest Territories	8,420	9,480	36,175	38,170	4.3	4.0
Canada	5,727,895	6,324,975	19,783,200	20,602,630	3.5	3.3

2.30 Families by family structure

Family structure	Number			Percentage		
	1971	1976	1981	1971	1976	1981
Husband-wife families	4,575,640	5,168,560	5,610,970	91.8	90.2	88.7
Lone parent families	477,525	559,330	714,005	9.4	9.8	11.3
Male parent	100,355	94,990	124,175	2.0	1.7	2.0
Female parent	377,165	464,345	589,825	7.5	8.1	9.3
Total families	5,053,170	5,727,895	6,324,975	100.0	100.0	100.0

2.31 Husband-wife and lone parent families

Age	1971		1976		1981	
	No.	%	No.	%	No.	%
Husband-wife families	4,605,485		5,168,565		5,610,965	
Husbands	4,605,485	100.0	5,168,565	100.0	5,610,965	100.0
Under 25 years	294,450	6.4	338,625	6.6	320,545	5.7
25-34 years	1,092,205	23.7	1,335,830	25.8	1,467,945	26.2
35-44 years	1,075,205	23.3	1,109,470	21.5	1,239,470	22.1
45-54 years	941,910	20.5	1,025,585	19.8	1,037,320	18.5
55-64 years	686,270	14.9	760,230	14.7	839,665	15.0
65 years and over	515,215	11.2	598,820	11.6	706,020	12.6
Wives	4,605,485	100.0	5,168,560	100.0	5,610,965	100.0
Under 25 years	567,440	12.3	623,490	12.1	594,310	10.6
25-34 years	1,154,550	25.1	1,416,840	27.4	1,590,390	28.3
35-44 years	1,043,710	22.7	1,065,965	20.6	1,187,340	21.2
45-54 years	920,470	20.0	987,600	19.1	972,425	17.3
55-64 years	581,495	12.6	674,715	13.1	778,220	13.9
65 years and over	337,805	7.3	399,960	7.7	488,275	8.7
Lone parent families	478,745		559,335		714,010	
Male	100,680	100.0	94,990	100.0	124,175	100.0
Under 25 years	4,225	4.2	3,280	3.5	2,530	2.0
25-34 years	16,535	16.4	12,275	12.9	15,370	12.4
35-44 years	22,210	22.1	21,565	22.7	31,950	25.7
45-54 years	22,525	22.4	24,730	26.0	34,725	28.0
55-64 years	16,375	16.3	16,065	16.9	21,505	17.3
65 years and over	18,805	18.7	17,075	18.0	18,110	14.6
Female	378,065	100.0	464,345	100.0	589,825	100.0
Under 25 years	25,295	6.7	33,080	7.1	45,525	7.7
25-34 years	66,665	17.6	98,660	21.2	139,535	23.7
35-44 years	78,350	20.7	100,100	21.6	140,065	23.7
45-54 years	85,160	22.5	99,155	21.4	114,155	19.4
55-64 years	59,500	15.7	67,765	14.2	79,125	13.4
65 years and over	63,090	16.7	67,595	14.6	71,430	12.1

Totals may not add due to rounding.

2.32 Husband-wife and lone parent families<sup>1</sup> by mother tongue

Province or territory	Husbands (%)			Total husbands <sup>2</sup>	Wives (%)			Total wives <sup>2</sup>
	English	French	Other		English	French	Other	
Newfoundland	98.5	0.7	0.8	121,645	98.7	0.6	0.8	121,645
Prince Edward Island	92.3	5.9	1.9	26,630	92.5	6.0	1.5	26,630
Nova Scotia	92.0	5.2	2.8	190,085	92.5	5.1	2.4	190,035
New Brunswick	64.4	33.8	1.8	155,155	64.2	34.3	1.5	155,155
Quebec	10.3	81.4	8.3	1,463,345	10.0	82.6	7.4	1,463,345
Ontario	71.3	5.7	23.0	2,028,695	72.6	6.1	21.4	2,028,695
Manitoba	64.8	5.8	29.5	232,970	66.4	6.0	27.7	232,970
Saskatchewan	72.7	3.4	23.9	222,105	75.4	3.4	21.2	222,105
Alberta	74.8	3.2	22.0	508,730	76.7	3.2	20.1	508,730
British Columbia	76.5	1.9	21.6	648,995	78.3	1.9	19.8	648,995
Yukon	89.0	2.4	14.6	4,955	83.1	3.1	13.6	4,955
Northwest Territories	54.2	4.0	41.8	8,235	52.9	3.8	43.3	8,235
Canada	57.2	25.3	17.4	5,611,495	58.2	25.8	16.0	5,611,495

	Male lone parents (%)			Total male lone parents <sup>2</sup>	Female lone parents (%)			Total female lone parents <sup>2</sup>	Total lone parents <sup>2</sup>
	English	French	Other		English	French	Other		
Newfoundland	97.2	1.1	1.6	2,815	98.6	0.6	0.8	10,670	13,480
Prince Edward Island	94.5	4.7	0.8	635	93.7	5.1	1.2	3,025	3,660
Nova Scotia	90.8	5.3	4.0	4,880	93.2	4.0	2.8	21,270	26,150
New Brunswick	64.5	34.3	1.3	3,890	65.1	33.4	1.5	17,580	21,470
Quebec	10.2	82.5	7.3	35,015	10.8	83.7	5.5	173,390	208,400
Ontario	72.8	7.0	20.2	42,640	78.0	6.3	15.8	207,575	250,210
Manitoba	63.1	7.2	29.7	5,120	68.1	5.3	26.6	24,150	29,265
Saskatchewan	64.5	4.5	31.0	4,125	72.2	2.7	25.1	19,505	23,630
Alberta	69.8	4.2	26.0	10,170	77.3	3.0	19.8	46,720	56,885
British Columbia	74.0	3.2	22.8	14,505	80.3	2.1	17.6	64,180	78,690
Yukon	73.9	4.4	21.7	230	73.5	4.1	21.4	490	720
Northwest Territories	36.1	4.2	59.7	360	38.8	2.2	58.4	890	1,250
Canada	55.4	28.1	16.5	124,380	58.4	28.8	12.8	589,445	713,815

<sup>1</sup>Data in this table were collected from a one in five sample of the Canadian population.

<sup>2</sup>Includes persons whose mother tongue was not stated.

2.33 Children living at home in private households<sup>1</sup>, 1981

Province or territory	Under 6 years	6-14 years	15-17 years	18-24 years	25 years and over	Total children living at home
Newfoundland	56,275	103,855	37,215	42,880	12,500	252,730
Prince Edward Island	10,995	18,460	7,425	9,115	2,975	48,965
Nova Scotia	69,940	120,805	47,210	59,700	17,140	314,790
New Brunswick	61,940	105,840	40,515	50,550	14,680	273,535
Quebec	552,385	808,885	341,095	507,195	146,995	2,356,550
Ontario	696,840	1,149,275	448,830	610,145	135,760	3,040,850
Manitoba	87,970	139,490	51,720	60,955	16,270	356,205
Saskatchewan	92,725	135,440	51,300	49,365	13,415	342,250
Alberta	215,985	306,810	107,015	116,140	22,125	768,080
British Columbia	222,400	349,905	127,675	152,905	31,515	884,395
Yukon	2,330	3,385	1,060	930	160	7,860
Northwest Territories	5,965	8,650	2,625	2,495	730	20,470
Canada	2,075,540	3,250,800	1,263,690	1,662,370	414,280	8,666,685

<sup>1</sup>Excludes children in collective households and households outside Canada.

### 2.34 Summary of principal vital statistics

Province or territory and year	Live births		Deaths		Natural increase <sup>1</sup>		Marriages		Divorces	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>3</sup>
<b>NEWFOUNDLAND</b>										
Av. 1961-65	15,104	31.8	3,142	6.6	11,962	25.2	3,331	7.0	5	1.0
" 1966-70	13,057	25.8	3,122	6.2	9,935	19.6	4,147	8.2	56	11.1
" 1971-75	12,058	22.5	3,292	6.1	8,766	16.4	4,686	8.7	246	46.0
" 1976-80	10,644	18.7	3,211	5.6	7,433	13.1	3,885	6.8	469	82.5
1981	10,130	17.8	3,230	5.7	6,900	12.1	3,758	6.6	569	100.2
<b>PRINCE EDWARD ISLAND</b>										
Av. 1961-65	2,767	25.7	1,006	9.3	1,761	16.4	672	6.2	8	7.8
" 1966-70	2,063	18.9	1,020	9.4	1,044	9.6	817	7.5	45	41.3
" 1971-75	1,973	17.3	1,045	9.2	928	8.1	983	8.6	70	61.5
" 1976-80	1,957	16.1	1,038	8.5	919	7.6	927	7.6	139	114.1
1981	1,897	15.5	992	8.1	905	7.4	849	6.9	187	152.6
<b>NOVA SCOTIA</b>										
Av. 1961-65	18,526	24.7	6,312	8.4	12,214	16.3	5,313	7.1	277	36.9
" 1966-70	14,217	18.7	6,622	8.7	7,594	10.0	6,335	8.3	573	75.4
" 1971-75	13,428	16.7	6,842	8.5	6,585	8.2	7,124	8.9	1,217	151.4
" 1976-80	12,504	14.9	6,928	8.2	5,575	6.6	6,653	7.9	2,021	240.2
1981	12,079	14.3	6,958	8.2	5,121	6.0	6,632	7.8	2,285	269.6
<b>NEW BRUNSWICK</b>										
Av. 1961-65	15,668	25.8	4,749	7.8	10,919	18.0	4,531	7.5	199	32.7
" 1966-70	11,984	19.3	4,873	7.8	7,112	11.4	5,481	8.8	267	42.9
" 1971-75	11,730	18.1	5,073	7.8	6,657	10.3	6,203	9.6	607	93.7
" 1976-80	11,120	16.0	5,208	7.5	4,773	6.9	5,403	7.8	1,120	161.5
1981	10,503	15.1	5,139	7.4	5,364	7.7	5,108	7.3	1,334	191.6
<b>QUEBEC</b>										
Av. 1961-65	131,453	24.0	37,698	6.9	93,755	17.1	38,126	7.0	380	6.9
" 1966-70	99,068	16.8	39,475	6.7	59,592	10.1	46,768	7.9	2,018	34.1
" 1971-75	87,966	14.4	42,425	7.0	45,541	7.5	51,475	8.4	9,217	151.3
" 1976-80	96,592	15.4	43,369	6.9	53,224	8.5	47,217	7.5	14,566	232.0
1981	95,322	14.8	42,684	6.6	52,638	8.2	41,005	6.4	19,193	298.1
<b>ONTARIO</b>										
Av. 1961-65	152,629	23.5	52,664	8.1	99,965	15.4	46,794	7.2	3,342	51.3
" 1966-70	130,166	17.8	55,415	7.6	74,751	10.2	62,216	8.5	7,452	102.1
" 1971-75	125,847	15.9	59,313	7.5	66,534	8.4	71,833	9.1	14,389	181.5
" 1976-80	122,278	14.5	61,480	7.3	60,798	7.2	68,281	8.1	20,619	244.6
1981	122,183	14.2	62,838	7.3	59,345	6.9	70,281	8.1	21,680	251.4
<b>MANITOBA</b>										
Av. 1961-65	22,137	23.4	7,637	8.1	14,500	15.3	6,674	7.1	376	39.7
" 1966-70	17,734	18.3	7,868	8.1	9,865	10.2	8,283	8.5	805	82.9
" 1971-75	17,370	17.4	8,252	8.3	9,118	9.1	9,130	9.1	1,640	164.1
" 1976-80	16,415	15.9	8,278	8.0	8,137	7.9	8,081	7.9	2,129	206.9
1981	16,073	15.7	8,648	8.4	7,425	7.2	8,123	7.9	2,399	233.8
<b>SASKATCHEWAN</b>										
Av. 1956-60	24,046	26.9	6,753	7.5	17,293	19.4	6,395	7.1	247	27.6
" 1961-65	22,811	24.4	7,268	7.8	15,543	16.6	6,316	6.7	298	31.8
" 1966-70	17,852	18.7	7,466	7.8	10,386	10.9	7,460	7.8	566	59.3
" 1971-75	15,343	16.9	7,627	8.4	7,716	8.5	7,918	8.7	940	103.3
" 1976-80	16,613	17.5	7,634	8.1	8,979	9.5	7,354	7.8	1,495	157.8
1981	17,209	17.8	7,523	7.8	9,686	10.0	7,329	7.6	1,932	199.5
<b>ALBERTA</b>										
Av. 1956-60	36,920	30.6	8,329	6.9	28,591	23.7	10,230	8.5	788	65.1
" 1961-65	37,004	26.5	9,317	6.7	27,687	19.8	10,581	7.6	1,226	87.5
" 1966-70	30,851	20.2	9,839	6.4	21,012	13.8	13,711	9.0	2,481	162.4
" 1971-75	30,110	17.8	10,927	6.5	19,183	11.3	16,490	9.7	4,457	262.9
" 1976-80	35,923	18.4	11,991	6.1	23,932	12.2	18,764	9.6	6,342	324.1
1981	42,638	19.1	12,823	5.7	29,815	13.3	21,781	9.7	8,418	376.2
<b>BRITISH COLUMBIA</b>										
Av. 1956-60	38,930	25.7	13,980	9.2	24,950	16.5	11,955	7.9	1,514	100.0
" 1961-65	36,753	21.5	15,236	8.9	21,517	12.6	11,927	7.0	1,592	93.1
" 1966-70	34,266	17.1	16,737	8.3	17,529	8.7	17,186	8.6	3,272	163.1
" 1971-75	35,100	15.2	18,445	8.0	16,654	7.2	21,182	9.2	6,006	260.3
" 1976-80	37,661	14.8	19,003	7.5	18,658	7.3	21,999	8.7	8,607	338.8
1981	41,474	15.1	19,857	7.2	21,617	7.9	24,699	9.0	9,533	347.4
<b>YUKON</b>										
Av. 1956-60	505	39.4	91	7.1	414	32.3	109	8.5	..	..
" 1961-65	509	34.9	87	6.0	422	28.9	107	7.3	17	118.0
" 1966-70	407	27.1	89	5.9	319	21.3	153	10.2	31	206.7
" 1971-75	456	22.7	109	5.4	347	17.3	189	9.4	47	233.3
" 1976-80	461	21.4	114	5.3	347	16.1	194	9.0	67	311.0
1981	536	23.2	141	6.1	395	17.1	235	10.2	75	324.0

2.34 Summary of principal vital statistics (concluded)

Province or territory and year	Live births		Deaths		Natural increase <sup>1</sup>		Marriages		Divorces	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>3</sup>
NORTHWEST TERRITORIES										
Av. 1956-60	943	46.7	310	15.3	633	31.4	155	7.7	1	..
" 1961-65	1,174	45.9	250	9.8	924	36.1	154	6.0	3	11.5
" 1966-70	1,244	41.5	229	7.6	1,015	33.8	212	7.1	13	43.3
" 1971-75	1,189	30.9	235	6.1	955	24.8	242	6.3	44	113.4
" 1976-80	1,233	28.5	212	4.9	1,021	23.6	258	6.0	71	164.7
1981	1,302	28.5	196	4.3	1,106	24.2	282	6.2	66	144.3
CANADA										
Av. 1956-60	469,555	27.6	136,669	8.0	332,886	19.6	132,047	7.8	6,498	38.2
" 1961-65	456,534	24.1	145,368	7.7	311,166	16.4	134,524	7.1	7,723	40.7
" 1966-70	372,909	18.0	152,755	7.4	220,154	10.6	172,769	8.3	17,579	84.8
" 1971-75	352,570	16.0	163,585	7.4	188,984	8.6	197,455	8.9	38,880	176.0
" 1976-80	363,402	15.5	168,468	7.2	194,934	8.3	189,018	8.1	57,645	245.6
1981	371,346	15.3	171,029	7.0	200,317	8.2	190,082	7.8	67,671	278.0

<sup>1</sup>Excess births over deaths.  
<sup>2</sup>Per 1,000 population.  
<sup>3</sup>Per 100,000 population.

2.35 Stillbirths and ratio per 1,000 live births

Year	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	Canada
Number (28 weeks or more gestation)													
Av. 1966-70	171	28	181	158	1,074	1,402	195	174	278	311	4	20	3,996
" 1971-75	135	21	121	132	686	1,068	149	135	210	265	5	14	2,941
1973	151	15	119	132	658	1,034	151	144	206	243	3	10	2,866
1974	127	20	123	125	629	1,019	128	132	188	252	7	16	2,766
1975	116	25	98	130	650	906	128	100	173	284	2	15	2,627
1976	95	19	94	103	694 <sup>c</sup>	957	149	116	201	252	5	6	2,691 <sup>c</sup>
1977	77	14	80	70	610	850	119	126	238	227	1	15	2,437
1978	93	12	91	78	519	767	109	104	219	227	1	12	2,236
1979	48	14	73	79	534	726	99	110	201	209	1	7	2,101
1980	45	11	70	75	444	698	89	95	216	196	1	12	1,952
1981	49	9	76	59	479	641	92	103	215	242	1	6	1,972
Ratio													
Av. 1966-70	13.0	13.5	12.7	13.1	10.8	10.7	10.9	9.7	9.0	9.0	9.8	16.0	10.7
" 1971-75	11.4	10.6	9.0	11.3	7.9	8.5	8.6	8.8	7.0	7.6	10.3	11.9	8.4
1973	12.7	8.0	9.0	11.6	7.8	8.4	8.9	9.7	7.0	7.1	7.1	8.3	8.3
1974	12.4	9.8	8.9	10.0	6.9	7.7	7.0	8.1	5.7	6.7	12.1	14.4	7.5
1975	10.3	13.0	7.5	11.0	7.0	7.2	7.5	6.6	5.5	7.8	4.9	12.8	7.3
1976	8.5	9.8	7.3	8.7	7.2 <sup>c</sup>	7.8	8.9	7.3	6.1	7.0	11.2	12.6	7.5 <sup>c</sup>
1977	6.9	7.1	6.5	6.1	6.4	6.9	7.1	7.6	6.9	6.5	2.3	12.6	6.7
1978	8.9	6.0	7.3	7.2	5.5	6.3	6.6	6.3	6.2	6.1	11.2	10.0	6.2
1979	4.7	7.2	5.9	7.3	5.4	6.0	6.1	6.5	5.4	5.4	2.0	5.5	5.7
1980	4.4	5.6	5.7	7.1	4.6	5.7	5.6	5.6	5.4	4.9	2.1	9.2	5.3
1981	4.8	4.7	6.3	5.6	5.0	5.2	5.7	6.0	5.0	5.8	1.9	4.6	5.3

2.36 Fertility rate<sup>1</sup> and reproduction rate<sup>2</sup>

Year and province or territory	Age group							Total fertility rate	Gross reproduction rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
1966	48.2	169.1	163.5	103.3	57.5	19.1	1.7	2,812	1,369
1971	40.1	134.4	142.0	77.3	33.6	9.4	0.6	2,187	1,060
1972 <sup>2</sup>	33.4	110.3	129.9	65.6	21.1	4.3	0.3	1,825	0.877
1977 <sup>2,3</sup>	32.0	108.0	129.8	67.1	20.5	3.6	0.3	1,806	0.886
1978	29.7	103.1	128.1	67.1	19.5	3.6	0.3	1,757	0.857
1979	27.9	101.8	130.8	69.1	19.5	3.4	0.2	1,764	0.856
1980	27.6	100.1	129.4	69.3	19.4	3.1	0.2	1,746	0.849
1981	26.4	96.7	126.9	68.0	19.4	3.2	0.2	1,704	0.829
1977									
Prince Edward Island	45.3	119.1	138.5	76.6	28.0	6.4	1.2	2,076	1,023
Nova Scotia	46.5	109.7	116.5	58.4	18.4	4.5	0.2	1,771	0.857
New Brunswick	47.0	133.4	129.4	59.1	18.5	3.9	0.3	1,958	0.954
Quebec <sup>2</sup>	19.4	97.6	137.8	70.2	22.2	3.6	0.3	1,755	0.848
Ontario	30.7	102.2	123.5	66.0	19.8	3.3	0.2	1,729	0.840
Manitoba	44.9	114.5	135.7	70.5	22.7	4.3	0.3	1,965	0.961
Saskatchewan	54.8	145.9	152.4	69.8	24.3	5.6	0.5	2,267	1,104
Alberta	45.2	128.9	136.0	68.3	20.3	3.8	0.3	2,014	0.977
British Columbia	32.6	110.9	120.2	62.3	17.3	3.0	0.3	1,738	0.843
Yukon	33.0	118.3	120.0	76.0	25.0	2.0	—	1,972	0.943
Northwest Territories	112.3	177.3	150.0	91.9	58.2	14.0	4.3	3,040	1,529

**2.36 Fertility rate<sup>1</sup> and reproduction rate<sup>2</sup> (concluded)**

Year and province or territory	Age group							Total fertility rate	Gross reproduction rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49		
1978									
Prince Edward Island	44.2	118.9	136.2	76.6	27.1	4.8	0.7	2,043	0.999
Nova Scotia	44.2	109.5	119.6	58.6	17.2	3.5	0.3	1,765	0.867
New Brunswick	42.7	118.3	123.1	54.0	14.3	3.5	0.3	1,781	0.882
Quebec	17.4	93.9	134.4	68.9	19.6	3.5	0.3	1,690	0.820
Ontario	28.1	96.4	122.4	66.4	18.9	3.3	0.2	1,679	0.819
Manitoba	42.8	110.3	132.3	70.0	22.3	4.8	0.2	1,914	0.938
Saskatchewan	54.3	148.2	144.5	67.8	20.3	4.7	0.6	2,202	1.072
Alberta	41.9	123.6	135.7	71.0	19.6	3.9	0.2	1,980	0.960
British Columbia	30.2	104.4	121.5	65.3	18.3	3.1	0.1	1,715	0.835
Yukon	60.9	112.5	120.8	80.0	26.7	4.0	—	2,025	1.059
Northwest Territories	114.2	154.3	162.0	108.0	49.2	17.0	3.8	3,043	1.506
1979									
Prince Edward Island	36.3	115.0	138.5	76.6	22.4	4.8	—	1,968	0.956
Nova Scotia	40.5	105.7	116.9	58.8	15.5	4.0	0.1	1,708	0.832
New Brunswick	38.4	117.7	120.9	56.7	15.2	2.6	—	1,758	0.851
Quebec	17.1	95.1	141.6	72.4	20.2	3.0	0.2	1,748	0.843
Ontario	25.5	92.7	123.2	68.6	19.5	3.5	0.2	1,666	0.811
Manitoba	40.5	109.7	131.0	69.0	21.4	3.5	0.2	1,877	0.916
Saskatchewan	50.8	141.2	152.8	68.9	20.2	4.4	0.3	2,193	1.068
Alberta	40.4	124.7	136.5	69.1	19.4	4.0	0.2	1,972	0.960
British Columbia	29.6	103.5	122.4	67.6	18.4	2.6	0.2	1,722	0.839
Yukon	39.2	126.9	148.3	94.0	25.0	4.0	—	2,187	1.017
Northwest Territories	106.8	170.9	181.6	114.0	70.0	16.0	1.3	3,303	1.648
1980									
Prince Edward Island	36.4	110.5	139.6	71.3	22.9	7.3	0.7	1,944	0.914
Nova Scotia	37.2	102.9	116.5	58.1	15.9	3.3	0.1	1,670	0.815
New Brunswick	38.3	111.5	119.4	50.9	13.5	2.4	0.1	1,681	0.815
Quebec	16.1	92.7	137.2	70.6	19.8	3.0	0.2	1,698	0.825
Ontario	24.7	91.4	123.2	70.0	19.8	3.1	0.2	1,662	0.811
Manitoba	41.2	105.8	126.9	71.0	19.5	3.5	—	1,840	0.887
Saskatchewan	51.7	140.5	148.0	65.9	18.9	3.6	0.2	2,144	1.031
Alberta	43.6	127.4	137.6	70.5	19.8	3.5	0.3	2,014	0.971
British Columbia	29.3	100.7	123.1	70.3	18.9	2.7	0.2	1,726	0.842
Yukon	44.5	120.8	132.5	98.0	21.7	—	—	2,088	0.983
Northwest Territories	108.1	187.0	163.7	125.7	61.8	20.0	6.7	3,365	1.709
1981									
Prince Edward Island	33.5	109.0	135.2	73.0	26.4	4.0	0.4	1,908	0.973
Nova Scotia	35.2	103.9	113.9	56.9	15.4	3.0	0.3	1,643	0.808
New Brunswick	35.1	116.7	118.3	54.0	15.6	2.6	0.2	1,712	0.818
Quebec	15.0	87.8	131.1	67.8	18.1	2.8	0.2	1,614	0.780
Ontario	23.1	89.1	121.9	68.6	20.4	3.4	0.1	1,633	0.799
Manitoba	39.9	107.7	130.8	68.3	20.3	4.0	0.3	1,856	0.902
Saskatchewan	47.9	137.6	149.2	69.6	19.8	4.2	0.3	2,143	1.035
Alberta	43.6	112.0	134.6	72.0	20.8	3.8	0.3	1,936	0.941
British Columbia	29.0	99.5	121.9	68.9	19.1	2.8	0.1	1,706	0.838
Yukon	66.3	137.1	126.8	78.6	18.7	—	—	2,138	1.045
Northwest Territories	113.0	175.4	153.0	96.5	47.0	11.1	3.6	2,998	1.385

<sup>1</sup>Excludes Newfoundland, 1966-81.<sup>2</sup>Minor adjustments made to Quebec births for the years 1976 and 1977.<sup>3</sup>Births for which ages of mother were not available, have been proportionately distributed in deriving various rates.**2.37 Marriages and rate per 1,000 population**

Province or territory	1978		1979		1980		1981	
	Total marriages	Rate per 1,000 population	Total marriages	Rate per 1,000 population	Total marriages	Rate per 1,000 population	Total marriages	Rate per 1,000 population
Newfoundland	3,841	6.8	3,737	6.5	3,783	6.5	3,758	6.6
Prince Edward Island	939	7.7	893	7.3	939	7.5	849	6.9
Nova Scotia	6,560	7.6	6,920	8.2	6,791	8.0	6,632	7.3
New Brunswick	5,310	7.6	5,355	7.6	5,321	7.5	5,108	7.3
Quebec	45,936	7.3	46,341	7.4	44,848	7.1	41,005	6.4
Ontario	67,491	8.0	67,980	8.0	68,840	8.0	70,281	8.1
Manitoba	8,232	8.0	7,769	7.5	7,869	7.6	8,123	7.9
Saskatchewan	7,139	7.5	7,272	7.6	7,561	7.8	7,329	7.6
Alberta	18,277	9.4	18,999	9.4	20,818	10.0	21,781	9.7
British Columbia	21,388	8.5	22,087	8.6	23,830	9.0	24,699	9.0
Yukon	194	8.9	181	8.4	200	9.3	235	10.2
Northwest Territories	216	5.0	277	6.4	269	6.2	282	6.2
Canada	185,523	7.9	187,811	7.9	191,069	8.0	190,082	7.8

2.38 Brides and bridegrooms

Year and age group	Marital status							
	Brides							
	Percentage				Number			
	Spinsters	Widows	Divorced	Total	Spinsters	Widows	Divorced	Total
1977								
Total, all ages	156,854	6,935	23,555	187,344	83.7	3.7	12.6	100.0
Average age    yr	22.8	53.2	34.7	25.4	...	...	...	...
1978								
Total, all ages	154,016	6,576	24,931	185,523	83.0	3.6	13.4	100.0
Average age    yr	23.0	53.0	34.5	25.6	...	...	...	...
1979								
Total, all ages	154,982	6,337	26,492	187,811	82.5	3.4	14.1	100.0
Average age    yr	23.1	53.5	34.6	25.8	...	...	...	...
1980								
Under 15 years	17	1	—	18	94.4	5.6	—	100.0
15-19    "	32,324	4	65	32,393	99.8	--	0.2	100.0
20-24    "	86,461	122	2,767	89,350	96.8	0.1	3.1	100.0
25-29    "	27,592	329	7,495	35,416	77.9	0.9	21.2	100.0
30-34    "	6,704	401	7,209	14,314	46.8	2.8	50.4	100.0
35-39    "	1,862	406	4,063	6,331	29.4	6.4	64.2	100.0
40-44    "	742	471	2,533	3,746	19.8	12.6	67.6	100.0
45-49    "	436	583	1,712	2,731	16.0	21.3	62.7	100.0
50-54    "	284	693	1,110	2,087	13.6	33.2	53.2	100.0
55-59    "	186	856	631	1,673	11.1	51.2	37.7	100.0
60-64    "	135	852	257	1,244	10.9	68.4	20.7	100.0
65 years and over	108	1,433	140	1,681	6.4	85.3	8.3	100.0
Total, stated ages	156,851	6,151	27,982	190,984	82.1	3.2	14.7	100.0
Age not stated	67	7	11	85	78.8	8.2	13.0	100.0
Total, all ages	156,918	6,158	27,993	191,069	82.1	3.2	14.7	100.0
Average age    yr	23.3	53.3	34.5	25.9	...	...	...	...
1981								
Under 15 years	13	—	—	13	100.0	—	—	100.0
15-19    "	28,318	5	57	28,380	99.8	--	0.2	100.0
20-24    "	85,842	128	2,620	88,590	96.9	0.1	3.0	100.0
25-29    "	29,079	358	7,883	37,320	77.9	1.0	21.1	100.0
30-34    "	7,350	381	7,487	15,218	48.3	2.5	49.2	100.0
35-39    "	1,966	418	4,624	7,008	28.0	6.0	66.0	100.0
40-44    "	775	441	2,802	4,018	19.3	11.0	69.7	100.0
45-49    "	404	549	1,803	2,756	14.7	19.9	65.4	100.0
50-54    "	304	719	1,169	2,192	13.9	32.8	53.3	100.0
55-59    "	183	818	639	1,640	11.2	49.9	38.9	100.0
60-64    "	134	854	285	1,273	10.5	67.1	22.4	100.0
65 years and over	92	1,385	144	1,621	5.7	85.4	8.9	100.0
Total, stated ages	154,460	6,056	29,513	190,029	81.3	3.2	15.5	100.0
Age not stated	46	3	4	53	86.8	5.7	7.5	100.0
Total, all ages	154,506	6,059	29,517	190,082	81.3	3.2	15.5	100.0
Average age    yr	23.5	53.2	34.7	26.2	...	...	...	...

2.38 Brides and bridegrooms (concluded)

Year and age group		Marital status							
		Bridegrooms							
		Number				Percentage			
		Bachelors	Widowers	Divorced	Total	Bachelors	Widowers	Divorced	Total
1977									
Total, all ages		154,906	6,211	26,227	187,344	87.2	3.3	14.0	100.0
Average age	yr	25.1	58.8	38.2	28.1	...	...	...	...
1978									
Total, all ages		151,884	5,926	27,713	185,523	81.9	3.2	14.9	100.0
Average age	yr	25.2	58.8	38.1	28.2	...	...	...	...
1979									
Total, all ages		152,731	5,860	29,220	187,811	81.3	3.1	15.6	100.0
Average age	yr	25.4	59.3	38.1	28.4	...	...	...	...
1980									
Under 15 years		—	—	—	—	—	—	—	—
15-19	“	8,016	1	—	8,017	100.0	—	—	100.0
20-24	“	80,304	21	834	81,159	99.0	—	1.0	100.0
25-29	“	46,071	132	5,629	51,832	88.9	0.2	10.9	100.0
30-34	“	13,034	224	8,116	21,374	61.0	1.0	38.0	100.0
35-39	“	3,418	259	5,903	9,580	35.7	2.7	61.6	100.0
40-44	“	1,218	260	3,765	5,243	23.2	5.0	71.8	100.0
45-49	“	738	469	2,729	3,936	18.8	11.9	69.3	100.0
50-54	“	496	654	1,909	3,059	16.2	21.4	62.4	100.0
55-59	“	332	836	1,136	2,304	14.4	36.3	49.3	100.0
60-64	“	213	884	563	1,660	12.8	53.3	33.9	100.0
65 years and over		196	2,135	434	2,765	7.1	77.2	15.7	100.0
Total, stated ages		154,036	5,875	31,018	190,929	80.7	3.1	16.2	100.0
Age not stated		102	13	25	140	72.9	9.3	17.8	100.0
Total, all ages		154,138	5,888	31,043	191,069	80.7	3.1	16.2	100.0
Average age	yr	25.5	59.0	38.0	28.5	...	...	...	...
1981									
Under 15 years		—	—	—	—	—	—	—	—
15-19	“	6,738	—	1	6,739	100.0	—	—	100.0
20-24	“	76,438	19	739	77,196	99.0	—	1.0	100.0
25-29	“	47,968	132	5,548	53,648	89.5	0.2	10.3	100.0
30-34	“	13,735	195	8,628	22,558	60.9	0.9	38.2	100.0
35-39	“	3,719	237	6,394	10,350	35.9	2.3	61.8	100.0
40-44	“	1,332	286	4,021	5,639	23.6	5.1	71.3	100.0
45-49	“	718	411	2,734	3,863	18.6	10.6	70.8	100.0
50-54	“	500	607	2,003	3,110	16.1	19.5	64.4	100.0
55-59	“	356	816	1,227	2,399	14.8	34.0	51.2	100.0
60-64	“	195	845	641	1,681	11.6	50.3	38.1	100.0
65 years and over		211	2,143	447	2,801	7.5	76.5	16.0	100.0
Total, stated ages		151,910	5,691	32,383	189,984	80.0	3.0	17.0	100.0
Age not stated		68	8	22	98	69.4	8.2	22.4	100.0
Total, all ages		151,978	5,699	32,405	190,082	80.0	3.0	17.0	100.0
Average age	yr	25.7	59.3	38.2	28.8	...	...	...	...

## 2.39 Marriages by religious denominations

Year and denomination of bridegroom	Denomination of bride										Total marriages	Percentage of grooms
	Anglican	Baptist	Greek Orthodox	Jewish	Lutheran	Presbyterian	Roman Catholic	United Church	Other sects	Not stated		
1977												
Anglican	6,558	606	98	39	546	726	4,512	3,795	1,565	30	18,475	13.3
Baptist	622	2,158	17	4	129	146	931	874	526	9	5,416	3.9
Greek Orthodox	135	27	997	9	74	39	403	233	226	1	2,144	1.5
Jewish	51	6	4	995	13	11	97	49	102	1	1,329	1.0
Lutheran	564	112	72	11	1,193	174	1,171	1,049	515	15	4,876	3.5
Presbyterian	762	177	21	8	167	1,371	1,126	1,087	373	1	5,093	3.6
Roman Catholic	4,283	812	300	68	1,128	1,068	24,718	5,760	3,955	53	42,145	30.3
United Church	3,643	843	167	26	1,014	993	5,664	12,863	1,947	33	27,193	19.5
Other sects	1,975	623	155	114	706	464	4,971	2,797	19,979	30	31,814	22.9
Not stated	48	17	3	—	22	11	87	55	53	392	688	0.5
Total	18,641	5,381	1,834	1,274	4,992	5,003	43,680	28,562	29,241	565	139,173	100.0
Percentage of brides	13.4	3.9	1.3	0.9	3.6	3.6	31.4	20.5	21.0	0.4	100.0	...
1978												
Anglican	6,292	576	109	41	557	692	4,477	3,757	1,511	38	18,050	12.9
Baptist	663	2,092	22	4	141	180	958	871	531	13	5,475	3.9
Greek Orthodox	141	27	877	7	79	34	399	221	220	8	2,013	1.5
Jewish	65	8	5	1,057	19	10	109	55	125	—	1,453	1.1
Lutheran	535	136	58	7	1,246	162	1,186	1,020	553	14	4,917	3.5
Presbyterian	735	164	27	15	163	1,304	1,163	1,056	392	8	5,027	3.6
Roman Catholic	4,351	888	295	69	1,113	1,067	24,582	5,831	4,078	76	42,350	30.3
United Church	3,594	771	171	40	1,003	980	5,857	12,827	2,057	31	27,331	19.6
Other sects	2,055	673	177	117	675	466	5,035	2,763	20,154	42	32,157	23.0
Not stated	67	14	2	—	28	11	116	83	58	435	814	0.6
Total	18,498	5,349	1,743	1,357	5,024	4,906	43,882	28,484	29,679	665	139,587	100.0
Percentage of brides	13.3	3.8	1.2	1.0	3.6	3.5	31.4	20.4	21.3	0.5	100.0	...
1979												
Anglican	6,394	637	101	42	593	676	4,663	3,790	1,670	34	18,600	13.1
Baptist	586	2,130	24	6	131	160	923	835	520	11	5,326	3.8
Greek Orthodox	162	11	762	7	79	32	399	207	212	2	1,873	1.3
Jewish	57	12	—	1,046	12	17	98	58	121	1	1,422	1.0
Lutheran	530	137	58	6	1,255	148	1,191	1,063	543	18	4,949	3.5
Presbyterian	753	155	27	7	182	1,279	1,173	1,052	401	3	5,032	3.6
Roman Catholic	4,403	869	273	80	1,188	1,070	24,865	6,001	4,352	68	43,169	30.5
United Church	3,658	756	166	29	927	997	5,813	12,778	2,013	53	27,190	19.2
Other sects	2,068	675	180	113	743	510	5,204	2,802	20,582	56	32,933	23.3
Not stated	73	16	5	3	27	12	121	95	77	547	976	0.7
Total	18,684	5,398	1,596	1,339	5,137	4,901	44,450	28,681	30,491	793	141,470	100.0
Percentage of brides	13.2	3.8	1.1	0.9	3.6	3.5	31.4	20.3	21.6	0.6	100.0	...
1980												
Anglican	6,348	548	137	68	549	715	4,496	3,600	2,044	117	18,622	12.7
Baptist	610	2,158	22	6	144	146	905	750	726	25	5,492	3.8
Greek Orthodox	126	24	711	4	61	33	306	183	181	8	1,637	1.1
Jewish	48	14	5	1,048	10	13	97	44	126	6	1,411	1.0
Lutheran	559	146	62	12	1,253	175	1,235	1,022	776	38	5,278	3.6
Presbyterian	699	167	38	14	155	1,351	1,064	913	499	21	4,921	3.4
Roman Catholic	4,633	954	451	142	1,206	1,205	25,381	5,957	5,770	234	45,933	31.4
United Church	3,661	801	225	57	1,013	963	5,993	12,587	2,834	130	28,264	19.3
Other sects	1,668	577	240	142	572	386	4,668	2,103	22,826	127	33,309	22.8
Not stated	72	14	7	7	19	8	148	63	75	941	1,354	0.9
Total	18,424	5,403	1,898	1,500	4,982	4,995	44,293	27,222	35,857	1,647	146,221	100.0
Percentage of brides	12.6	3.7	1.3	1.0	3.4	3.4	30.3	18.6	24.6	1.1	100.0	...

## 2.39 Marriages by religious denominations (concluded)

Year and denomination of bridegroom	Denomination of bride										Total marriages	Percentage of grooms
	Anglican	Baptist	Greek Orthodox	Jewish	Lutheran	Presbyterian	Roman Catholic	United Church	Other sects	Not stated		
1981												
Anglican	6,388	565	133	58	552	654	4,808	3,580	1,719	87	18,544	12.4
Baptist	606	2,180	22	14	113	169	925	766	623	14	5,432	3.6
Greek Orthodox	146	21	777	8	80	39	457	191	198	8	1,925	1.3
Jewish	59	9	6	1,136	13	11	139	72	139	6	1,590	1.1
Lutheran	544	139	51	7	1,263	139	1,231	1,021	567	37	4,999	3.4
Presbyterian	695	166	25	5	179	1,321	1,194	958	387	17	4,947	3.3
Roman Catholic	4,617	876	303	102	1,262	1,067	25,657	6,048	5,004	212	45,148	30.3
United Church	3,412	698	169	36	981	917	6,122	12,499	2,003	80	26,917	18.0
Other sects	2,125	705	181	145	761	531	5,866	2,788	24,342	111	37,555	25.2
Not stated	118	29	7	12	50	23	297	167	139	1,178	2,020	1.4
Total	18,710	5,388	1,674	1,523	5,254	4,871	46,696	28,090	35,121	1,750	149,077	100.0
Percentage of brides	12.6	3.6	1.1	1.0	3.5	3.3	31.3	18.8	23.6	1.2	100.0	...

## 2.40 Divorces and rates

Province or territory	Number		Per cent change	Rate per 100,000 population		Per cent change
	1971	1981		1971	1981	
Newfoundland	150	569	279.3	28.7	100.2	249.1
Prince Edward Island	61	187	206.6	54.7	152.6	179.0
Nova Scotia	721	2,285	216.9	91.6	269.6	194.3
New Brunswick	483	1,334	176.2	76.1	191.6	151.8
Quebec	5,203	19,193	268.9	86.3	298.1	245.4
Ontario	12,211	21,680	77.5	158.5	251.4	58.6
Manitoba	1,384	2,399	73.3	140.1	233.8	66.9
Saskatchewan	816	1,932	136.8	88.1	199.5	126.4
Alberta	3,656	8,418	130.3	224.6	376.2	67.5
British Columbia	4,928	9,533	93.4	225.6	347.4	54.0
Yukon	47	75	59.6	255.4	324.0	26.9
Northwest Territories	25	66	164.0	71.8	144.3	101.0
Canada	29,685	67,671	128.0	137.6	278.0	102.0

## 2.41 Alleged grounds for divorce by type of offence

Alleged grounds	1977		1978		1979		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No.	%
Marital offence										
Adultery	22,649	30.3	24,082	31.1	25,064	31.2	25,521	31.0	28,241	31.1
Physical cruelty	11,221	15.0	12,071	15.6	12,361	15.4	12,316	14.9	13,417	14.8
Mental cruelty	13,981	18.7	15,147	19.6	16,005	19.9	16,617	20.1	19,768	21.8
Other	207	0.3	229	0.3	187	0.2	173	0.2	184	0.2
Total	48,058	64.3	51,529	66.6	53,617	66.7	54,627	66.2	61,610	67.9
Marriage breakdown by reason of:										
Addiction to alcohol	1,791	2.4	1,655	2.1	1,671	2.1	1,508	1.8	1,543	1.7
Separation for not less than 3 years	22,447	30.1	22,163	28.6	23,097	28.8	24,689	30.0	26,059	28.8
Desertion by petitioner for not less than 5 years	1,870	2.5	1,578	2.0	1,485	1.8	1,267	1.5	1,066	1.2
Other	514	0.7	497	0.7	459	0.6	423	0.5	400	0.4
Total	26,622	35.7	25,893	33.4	26,712	33.3	27,887	33.8	29,068	32.1
Total, alleged grounds <sup>1</sup>	74,680	100.0	77,422	100.0	80,329	100.0	82,514	100.0	90,678	100.0

<sup>1</sup>Totals are higher than the number of divorces because some divorce decrees involve more than one alleged ground.

**2.42 Divorces by number of dependent children**

Number of children	1977		1978		1979		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No.	%
0	24,670	44.6	25,657	44.9	26,342	46.0	29,205	47.1	32,559	48.1
1	12,576	22.7	12,994	22.7	13,227	23.1	14,021	22.6	15,423	22.8
2	11,166	20.2	11,983	21.0	11,827	20.6	12,877	20.8	13,973	20.7
3	4,536	8.2	4,517	7.9	4,185	7.3	4,371	7.0	4,292	6.3
4	1,659	3.0	1,395	2.4	1,276	2.2	1,168	1.9	1,064	1.6
5 and more	763	1.3	609	1.1	465	0.8	377	0.6	360	0.5
Total, divorces	55,370	100.0	57,155	100.0	57,322	100.0	62,019	100.0	67,671	100.0
Average number of children	1.07	...	1.04	...	1.00	...	0.96	...	0.92	...

**2.43 Divorces by duration of marriage**

Duration of marriage	1977		1978		1979		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No.	%
Less than 1 year	148	0.3	139	0.3	157	0.3	152	0.2	163	0.2
1 year	1,144	2.1	1,204	2.1	1,216	2.1	1,124	1.8	1,282	1.9
2 years	2,061	3.7	2,163	3.8	2,214	3.7	2,340	3.8	2,517	3.7
3 "	2,701	4.9	2,916	5.1	3,144	5.3	3,144	5.1	3,263	4.8
4 "	3,610	6.5	3,669	6.4	3,940	6.6	4,264	6.9	4,420	6.6
Total, 1-4 years	9,516	17.2	9,952	17.4	10,514	17.7	10,872	17.6	11,482	17.0
5 years	3,779	6.8	4,064	7.1	4,245	7.1	4,469	7.2	4,873	7.2
6 "	3,583	6.5	3,847	6.7	4,227	7.1	4,487	7.2	4,809	7.1
7 "	3,565	6.4	3,630	6.4	3,855	6.5	4,206	6.8	4,545	6.7
8 "	3,032	5.5	3,270	5.7	3,497	5.9	3,736	6.0	4,090	6.1
9 "	2,781	5.0	2,921	5.1	3,231	5.4	3,413	5.5	3,670	5.4
Total, 5-9 years	16,740	30.2	17,732	31.0	19,055	32.0	20,311	32.7	21,987	32.5
10-14 years	10,033	18.1	10,643	18.6	11,281	19.0	11,944	19.3	13,271	19.6
15-19 "	6,631	12.0	6,651	11.6	6,558	11.0	6,884	11.1	7,668	11.3
20-24 "	5,132	9.3	5,075	8.9	5,092	8.6	5,049	8.1	5,534	8.2
25-29 "	3,567	6.4	3,470	6.1	3,341	5.6	3,387	5.5	3,709	5.5
30 years and over	3,537	6.4	3,424	6.0	3,409	5.7	3,341	5.4	3,760	5.6
Not stated	66	0.1	69	0.1	67	0.1	79	0.1	97	0.1
Total divorces	55,370	100.0	57,155	100.0	59,474	100.0	62,019	100.0	67,671	100.0
Median duration of marriage	10.5	...	10.3	...	10.0	...	9.9	...	10.0	...

**2.44 Divorces by marital status of husband and wife at time of marriage**

Marital status	1977		1978		1979		1980		1981	
	No.	%	No.	%	No.	%	No.	%	No.	%
Husband										
Single	51,015	92.2	52,525	91.9	54,338	91.4	56,187	90.6	61,378	90.7
Widowed	717	1.3	726	1.3	723	1.2	743	1.2	751	1.1
Divorced	3,622	6.5	3,885	6.8	4,407	7.4	5,074	8.2	5,528	8.2
Not stated	16	--	19	--	6	--	15	--	14	--
Total	55,370	100.0	57,155	100.0	59,474	100.0	62,019	100.0	67,671	100.0
Wife										
Single	50,815	91.8	52,295	91.5	54,054	90.9	55,959	90.2	61,248	90.6
Widowed	1,005	1.8	973	1.7	1,015	1.7	1,033	1.7	972	1.4
Divorced	3,545	6.4	3,876	6.8	4,399	7.4	5,015	8.1	5,438	8.0
Not stated	5	--	11	--	6	--	12	--	13	--
Total	55,370	100.0	57,155	100.0	59,474	100.0	62,019	100.0	67,671	100.0

## 2.45 Immigrant arrivals, 1955-81

Year	Arrivals	Year	Arrivals	Year	Arrivals
1955	109,946	1964	112,606	1973	184,200
1956	164,857	1965	146,758	1974	218,465
1957	282,164	1966	194,743	1975	187,881
1958	124,851	1967	222,876	1976	149,429
1959	106,928	1968	183,974	1977	114,914
1960	104,111	1969	161,531	1978	86,313
1961	71,689	1970	147,713	1979	112,096
1962	74,586	1971	121,900	1980	143,117
1963	93,151	1972	122,006	1981	128,618

## 2.46 Immigrant arrivals, by country of last permanent residence

Country of last permanent residence	1979	1980	1981	Country of last permanent residence	1979	1980	1981
Europe	32,858	41,168	46,295	Iraq	203	246	216
Austria	176	240	246	Israel	831	1,498	1,785
Belgium	503	599	648	Japan	666	737	770
British Isles	12,853	18,245	21,154	Jordan	130	173	131
England	10,008	14,379	17,065	Kampuchea	978	3,265	1,337
Northern Ireland	515	554	628	Korea, Republic of	817	956	1,430
Scotland	1,906	2,595	2,662	Laos	3,903	6,266	866
Wales	405	689	755	Lebanon	1,747	1,406	1,122
Channel Islands	19	28	44	Malaysia	546	702	708
Czechoslovakia	356	1,125	1,079	Pakistan	1,117	881	731
Denmark	218	255	271	Philippines	3,873	6,051	5,859
Finland	169	191	167	Singapore	225	290	389
France	1,900	1,900	2,089	Sri Lanka	117	144	223
Germany, Federal Republic of	1,323	1,643	2,188	Syria	174	207	331
Greece	1,247	1,093	958	Taiwan	707	827	834
Hungary	368	417	465	Thailand	213	396	123
Ireland	553	679	810	Vietnam	19,859	25,541	8,251
Italy	1,996	1,740	2,043	Other Asia <sup>1</sup>	523	791	986
Malta	204	191	257				
Netherlands	1,479	1,866	1,797	North and Central America	16,715	18,087	20,202
Norway	77	114	82	Antigua	74	109	140
Poland	1,045	1,185	3,850	Bahamas	52	55	56
Portugal	3,723	4,228	3,290	Barbados	293	354	353
Spain	271	355	402	Bermuda	104	107	68
Sweden	262	287	325	Grenada	136	144	164
Switzerland	1,073	857	863	Haiti	1,268	1,633	3,667
Turkey	257	444	838	Jamaica	3,213	3,161	2,553
USSR	1,385	2,079	868	Mexico	384	424	440
Yugoslavia	887	661	743	St. Kitts, Nevis and Anguilla	62	72	51
Other Europe	533	774	862	St. Vincent	161	166	183
				Trinidad and Tobago	786	953	953
Africa	3,958	4,330	4,887	United States	9,617	9,926	10,559
Angola	32	3	12	Other North and Central America	565	983	1,015
Egypt, Republic of	511	616	683				
Ghana	137	165	198	South America	5,898	5,433	6,136
Kenya	319	363	345	Argentina	596	449	467
Morocco	145	313	489	Bolivia	26	53	66
Mozambique	42	1	9	Brazil	236	300	335
Nigeria	98	133	140	Chile	1,155	1,176	1,029
South Africa, Republic of	1,339	1,370	1,428	Colombia	339	260	308
Tanzania	535	450	664	Ecuador	283	240	226
Uganda	16	8	16	French Guiana	—	3	1
Zambia	72	86	84	Guyana	2,473	2,278	1,836
Other Africa	712	822	819	Paraguay	88	61	35
				Peru	343	318	464
Australasia	1,395	1,555	1,317	Suriname	15	19	35
Australia	808	884	780	Uruguay	224	127	142
New Zealand	581	642	520	Venezuela	120	149	192
Papua New Guinea	6	29	17				
				Oceania	726	942	934
Asia	50,540	71,602	48,830	Fiji	518	637	699
Bangladesh	50	76	73	Mauritius	190	276	186
China	2,058	4,936	6,551	Other Oceania	18	29	49
Cyprus	113	133	137				
Hong Kong	5,966	6,309	6,451	Not stated	6	—	17
India	4,517	8,483	8,256				
Indonesia	163	267	214	Total, all countries	112,096	143,117	128,618
Iran	1,044	1,021	1,056				

<sup>1</sup>Includes 656 arrivals from the Socialist Republic of Vietnam.

2.47 Immigrant arrivals, by country of citizenship

Country of citizenship	1979	1980	1981	Country of citizenship	1979	1980	1981
Australia	680	701	638	New Zealand	525	602	480
Austria	184	234	238	Norway	74	116	77
Belgium	400	511	540	Pakistan	1,151	978	971
Britain and colonies	16,814	22,040	24,791	Philippines	3,870	6,053	5,920
Central America	294	325	527	Poland	877	863	2,930
China	2,264	5,123	6,681	Portugal	3,954	4,470	3,486
Czechoslovakia	89	172	388	South Africa	994	1,026	1,118
Denmark	227	272	293	South America	5,657	5,298	5,982
Egypt	503	611	660	Spain	236	211	299
Finland	195	208	205	Sri Lanka	141	185	371
France	1,767	1,729	2,027	Sweden	220	281	308
Germany, Federal Republic of	1,304	1,626	1,977	Switzerland	1,011	806	811
Greece	1,212	1,065	953	Trinidad and Tobago	798	959	947
Haiti	1,300	1,666	3,690	Turkey	283	481	874
Hungary	193	205	310	Union of Soviet Socialist Republics	183	167	120
India	4,853	8,880	8,672	United States	9,122	9,367	10,025
Ireland	631	781	896	Yugoslavia	927	735	785
Israel	759	1,404	1,711	Other African	1,490	1,676	1,837
Italy	2,129	1,820	2,056	Other Asian	5,569	6,818	8,217
Jamaica	3,278	3,194	2,634	Other European	468	651	752
Japan	576	701	756	Stateless	29,776	41,901	15,776
Lebanon	1,722	1,409	1,119	Other	1,360	2,173	2,048
Mexico	371	409	394				
Morocco	141	325	471				
Netherlands	1,524	1,889	1,857	Total	112,096	143,117	128,618

2.48 Intended destination of immigrants

Province or territory	1979			1980			1981		
	Male	Female	Total	Male	Female	Total	Male	Female	Total
Nfld.	303	250	553	276	265	541	244	236	480
PEI	144	145	289	96	94	190	59	67	126
NS	686	650	1,336	829	787	1,616	707	696	1,403
NB	558	587	1,145	586	621	1,207	489	499	988
Que.	9,857	9,665	19,522	11,566	10,972	22,538	10,381	10,737	21,118
Ont.	25,017	26,930	51,947	30,877	31,380	62,257	26,792	28,098	54,890
Man.	2,405	2,498	4,903	3,809	3,874	7,683	2,667	2,692	5,359
Sask.	1,471	1,289	2,760	1,984	1,619	3,603	1,203	1,198	2,401
Alta.	6,422	6,356	12,778	9,757	9,082	18,839	9,683	9,611	19,294
BC	7,812	8,774	16,586	12,050	12,387	24,437	10,631	11,376	22,007
YT and NWT	116	92	208	101	88	189	93	108	201
Not stated	32	37	69	8	9	17	173	178	351
Canada	54,823	57,273	112,096	71,939	71,178	143,117	63,122	65,496	128,618

2.49 Sex of immigrants

Year	Male	Female	Total
1976	72,605	76,824	149,429
1977	54,834	60,080	114,914
1978	40,057	46,256	86,313
1979	54,823	57,273	112,096
1980	71,939	71,178	143,117
1981	63,122	65,496	128,618

2.50 Marital status of immigrants

Year and sex	Single	Married	Widowed	Divorced	Separated	Total
1979						
Male	29,323	23,987	790	529	194	54,823
Female	24,264	27,451	4,253	862	443	57,273
1980						
Male	39,527	30,670	883	613	246	71,939
Female	31,605	33,061	5,068	980	464	71,178
1981						
Age group						
Male						
0- 4 years	4,115	—	—	—	—	4,115
5- 9 "	4,967	—	—	—	—	4,967
10-14 "	4,878	1	1	—	—	4,880
15-19 "	5,805	55	1	—	1	5,862
20-24 "	6,001	1,825	1	9	5	7,841
25-29 "	4,076	5,288	6	95	34	9,499
30-34 "	1,531	5,557	9	164	53	7,314
35-39 "	434	3,805	14	140	42	4,435
40-44 "	161	2,423	18	96	27	2,725
45-49 "	73	1,669	14	64	12	1,832
50-54 "	42	1,814	33	45	16	1,950
55-59 "	38	2,030	90	33	15	2,206
60-64 "	29	2,012	153	22	16	2,232
65-69 "	24	1,462	140	22	9	1,657
70 years +	30	1,138	414	20	5	1,607
Total, male	32,204	29,079	894	710	235	63,122
Female						
0- 4 years	3,927	—	—	—	—	3,927
5- 9 "	4,489	—	—	—	—	4,489
10-14 "	4,513	15	1	—	—	4,529
15-19 "	4,859	594	1	1	2	5,457
20-24 "	4,714	4,533	11	24	13	9,295
25-29 "	2,520	6,852	27	111	38	9,548
30-34 "	1,015	5,345	35	166	36	6,597
35-39 "	361	3,284	39	130	26	3,840
40-44 "	169	1,978	71	100	29	2,347
45-49 "	101	1,835	169	97	31	2,233
50-54 "	141	2,274	372	99	65	2,951
55-59 "	144	2,211	639	92	68	3,154
60-64 "	157	1,542	855	74	59	2,687
65-69 "	92	874	846	50	41	1,903
70 years +	131	540	1,778	65	25	2,539
Total, female	27,333	31,877	4,844	1,009	433	65,496

2.51 Estimates of annual emigration from Canada, 1961-82

June 1 to May 31	Total estimated emigration	June 1 to May 31	Total estimated emigration
1961-62	74,000	1971-72	66,100
1962-63	79,500	1972-73	62,300
1963-64	86,400	1973-74	84,000
1964-65	95,800	1974-75	79,400
1965-66	96,400	1975-76	65,400
Total, 1961-66	432,100	Total, 1971-76	357,200
1966-67	104,200	1976-77	57,122
1967-68	111,500	1977-78	63,291
1968-69	91,700	1978-79	63,559
1969-70	86,800	1979-80	51,060
1970-71	78,200	1980-81	43,609
Total, 1966-71	472,400	Total, 1976-81	278,641
		1981-82	41,746 <sup>P</sup>

2.52 Lifetime migration of Canadian-born population (thousands)

Province or territory of birth	Province or territory of residence, 1981												Total (place of birth)
	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	
Newfoundland	530.4	1.0	19.0	5.5	8.3	69.6	3.0	1.4	13.9	9.4	0.3	0.8	662.5
Prince Edward Island	0.7	98.4	8.2	5.5	2.8	18.8	0.8	0.8	5.5	3.6	0.1	0.1	145.4
Nova Scotia	5.7	5.4	684.1	28.4	14.3	118.7	5.8	3.3	28.3	28.4	0.4	0.8	923.7
New Brunswick	2.2	3.3	24.4	570.6	49.9	80.0	3.8	2.0	19.4	16.8	0.3	0.5	773.2
Quebec	2.8	1.7	13.4	21.0	5,603.9	314.2	9.2	6.1	47.9	52.6	0.7	1.3	6,074.9
Ontario	10.0	5.2	35.6	23.8	134.1	5,643.7	46.2	29.3	170.8	173.3	2.7	3.5	6,278.3
Manitoba	0.6	0.3	3.3	2.0	9.8	92.3	727.0	41.6	87.0	129.7	1.1	2.8	1,097.7
Saskatchewan	0.3	0.3	2.6	1.3	6.3	75.5	48.9	746.0	195.3	201.8	1.6	2.1	1,281.8
Alberta	0.6	0.6	3.5	1.8	6.6	47.5	13.0	28.6	1,195.7	205.3	2.6	3.4	1,509.1
British Columbia	0.6	0.4	3.7	1.6	6.1	46.1	9.4	12.4	79.6	1,254.9	3.3	1.4	1,419.5
Yukon	0.0	—	0.2	0.1	0.2	1.0	0.2	0.3	1.9	4.1	7.0	0.2	15.1
Northwest Territories	0.1	0.0	0.1	0.0	0.8	1.1	0.4	0.9	3.6	2.0	0.2	25.8	35.1
Total (place of residence)	554.0	116.7	798.1	661.8	5,843.1	6,508.5	867.7	872.8	1,848.8	2,082.0	20.2	42.8	20,216.3

Note: Figures shown in the diagonal are not strictly applicable in this table which shows interprovincial lifetime migration. They do not even imply interprovincial migration. These data are included for information purposes only.

2.53 Population 5 years and over by mobility status, Canada and provinces, 1976-81

Mobility status (based on residence as of June 1, 1976)	Province of residence as of June 3, 1981													
	Nfld.		PEI		NS		NB		Que.		Ont.			
	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%		
Non-movers <sup>1</sup>	349.4	68.0	71.9	64.5	471.4	60.6	387.6	61.0	3,254.4	55.2	4,214.6	53.1		
Movers <sup>2</sup>	164.7	32.0	39.5	35.5	305.9	39.4	247.6	39.0	2,637.9	44.8	3,718.4	46.9		
Non-migrants <sup>3</sup>	92.6	18.0	19.0	17.1	168.0	21.6	137.7	21.7	1,492.8	25.3	1,993.1	25.1		
Migrants <sup>4</sup>	72.1	14.0	20.5	18.4	137.9	17.7	110.0	17.3	1,145.1	19.4	1,725.2	21.7		
Within same province	51.1	9.9	9.4	8.4	75.0	9.7	61.1	9.6	999.1	17.0	1,229.4	15.5		
From different province	18.4	3.6	9.9	8.9	54.5	7.0	41.5	6.5	61.3	1.0	250.6	3.2		
From outside Canada	2.6	0.5	1.2	1.1	8.4	1.1	7.4	1.2	84.7	1.4	245.3	3.1		
Total <sup>5</sup>	514.1	100.0	111.4	100.0	777.2	100.0	635.3	100.0	5,892.3	100.0	7,933.0	100.0		
	Man.		Sask.		Alta.		BC		YT		NWT		Canada	
	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%	'000	%
Non-movers <sup>1</sup>	512.9	54.8	486.4	55.6	810.0	40.0	1,094.0	43.4	6.3	29.9	14.0	34.9	11,672.8	52.4
Movers <sup>2</sup>	423.3	45.2	388.0	44.4	1,214.3	60.0	1,427.0	56.6	14.7	70.1	26.0	65.1	10,607.3	47.6
Non-migrants <sup>3</sup>	258.2	27.6	195.1	22.3	522.4	25.8	641.2	25.4	6.1	29.2	12.6	31.6	5,538.8	24.9
Migrants <sup>4</sup>	165.1	17.6	192.8	22.1	692.0	34.2	785.8	31.2	8.6	40.9	13.4	33.5	5,068.5	22.7
Within same province	86.7	9.3	118.2	13.5	279.7	13.8	456.8	18.1	1.4	6.9	3.9	9.8	3,371.7	15.1
From different province	54.0	5.8	63.4	7.3	336.8	16.6	234.6	9.3	6.7	31.9	8.9	22.2	1,140.5	5.1
From outside Canada	24.4	2.6	11.3	1.3	75.5	3.7	94.5	3.7	0.4	2.1	0.6	1.5	556.2	2.5
Total <sup>5</sup>	936.2	100.0	874.4	100.0	2,024.3	100.0	2,521.0	100.0	20.9	100.0	40.0	100.0	22,280.1	100.0

<sup>1</sup>Persons living in same dwelling on June 3, 1981 as that of June 1, 1976.  
<sup>2</sup>Persons whose dwelling as of June 3, 1981 was in a different dwelling than that of June 1, 1976.  
<sup>3</sup>Persons whose residence as of June 3, 1981 was in a different dwelling but in the same municipality as that of June 1, 1976.  
<sup>4</sup>Persons whose residence as of June 3, 1981 was in a different municipality than that of June 1, 1976.  
<sup>5</sup>Excludes inmates in collective dwellings and persons in the armed forces or in other government service, stationed outside Canada.

## 2.54 Net internal migration and net migration for the population 5 years and over, for provinces and territories, 1976-81<sup>1</sup>

Province or territory	In-migration	Out-migration	Total net internal migration	Immigration <sup>2</sup>	Net migration <sup>3</sup>
Newfoundland	18,430	38,265	-19,835	2,560	-17,275
Prince Edward Island	9,945	9,950	-5	1,230	1,225
Nova Scotia	54,455	62,875	-8,420	8,405	-15
New Brunswick	41,460	49,965	-8,505	7,405	-1,100
Quebec	61,310	203,035	-141,725	84,700	-57,025
Ontario	250,575	328,640	-78,065	245,265	167,200
Manitoba	54,030	97,620	-43,590	24,410	-19,180
Saskatchewan	63,395	69,220	-5,825	11,275	5,450
Alberta	336,830	139,180	197,650	75,485	273,135
British Columbia	234,550	123,620	110,930	94,450	205,380
Yukon	6,675	7,220	-545	445	-100
Northwest Territories	8,885	10,940	-2,055	580	-1,475

<sup>1</sup>Excludes inmates in collective dwellings and persons stationed outside Canada in the armed forces or in diplomatic service.

<sup>2</sup>Includes return migrants.

<sup>3</sup>Excludes emigrants.

## 2.55 Migrant population 5 years and over, by urban or rural locality of residence

Locality of residence in 1976	Locality of residence in 1981					Total migrants (by residence in 1976)
	Urban		Rural			
	Total	Census metro- politan areas (CMA)	Census agglom- erations (CA)	Non-CMA or Non-CA	Total	
Internal migrants						
Total	3,393,120	2,242,840	492,425	657,855	1,119,135	817,720
Census metropolitan areas (CMA) <sup>1</sup>	1,971,315	1,543,310	179,945	248,060	499,545	327,150
Census agglomerations (CA)	468,045	243,680	129,890	94,470	184,230	122,820
Non-CMA or non-CA	953,755	455,845	182,590	315,315	435,360	367,755
Residence urban						
Total	2,785,795	1,940,700	368,090	477,000	863,070	609,125
Census metropolitan areas (CMA) <sup>1</sup>	1,882,740	1,476,030	171,605	235,100	476,390	311,370
Census agglomerations (CA)	407,470	219,330	103,600	84,540	164,685	109,650
Non-CMA or non-CA	495,585	245,340	92,885	157,360	221,995	188,105
Residence rural						
Total	607,315	302,150	124,335	180,850	256,060	208,605
Census metropolitan areas (CMA) <sup>1</sup>	88,570	67,280	8,335	12,960	23,160	15,780
Census agglomerations (CA)	60,575	24,350	26,300	9,930	19,545	13,175
Non-CMA or non-CA	458,170	210,520	89,700	157,960	213,355	179,650
External migrants (outside Canada)	503,520	429,295	35,665	38,555	52,675	37,345
Total migrants <sup>2</sup> (by residence in 1981)	3,896,640	2,672,135	528,090	696,410	1,171,810	855,065
						5,068,450

<sup>1</sup>As defined for the 1981 Census.<sup>2</sup>Exclude inmates in collective dwellings and persons stationed outside Canada in the armed forces or in diplomatic service.

2.56 Persons granted Canadian citizenship

Year	Total	Year	Total
1970	57,556	1976	117,276 <sup>f</sup>
1971	63,558	1977	107,899
1972	80,866	1978	223,018
1973	104,697	1979	156,699
1974	130,278	1980	118,590
1975	137,507 <sup>f</sup>	1981	94,457

Sources

- 2.1 – 2.23, 2.51 – 2.55 Demography Division, Statistics Canada.
- 2.24 Statistics Division, Reserves and Trusts Branch, Department of Indian and Northern Affairs.
- 2.25 – 2.33 Housing, Family and Social Statistics Division, Statistics Canada.
- 2.34 – 2.44 Health Division, Statistics Canada.
- 2.45 – 2.50 Public Affairs, Department of Employment and Immigration.
- 2.56 Communications Branch, Department of the Secretary of State.

## CHAPTER 3

---

# HEALTH



## OVERVIEW

---

During the past 50 years many infectious diseases that were once prevalent in Canada have been virtually eliminated. From 1931 to 1981 life expectancy at birth increased from 60 to 72 years for men and from 62 to nearly 79 years for women. Over the same period infant mortality rates declined from 85 per 1,000 live births to only 9.6.

As Canada moved into public insurance coverage of health care services, mortality declined. In 1982 the leading causes of death were cardiovascular diseases (46%), cancer (26%) and accidents (5%).

A new Canada Health Act in April 1984 consolidated earlier hospital and medical care insurance legislation, authorized continuing federal health transfers to the provinces and incorporated the provisions for extended health care services of the 1977 established programs financing legislation. It provided that the dollar value of extra billing by physicians in a province and user charges by hospitals would be deducted from federal contributions.

---

<b>3.1</b>	<b>Health status</b>	<b>85</b>
3.1.1	Life expectancy	85
3.1.2	Causes of death	86
3.1.3	Morbidity and disability	86
3.1.4	Specific health conditions	86
<b>3.2</b>	<b>Canadian health system</b>	<b>88</b>
3.2.1	Government responsibility	88
3.2.2	Health insurance plans	89
3.2.3	Health protection	90
3.2.4	Public health and community health	91
3.2.5	Health promotion and physical activity	92
3.2.6	Voluntary agencies	92
3.2.7	Research and planning	93
<b>3.3</b>	<b>Health personnel and facilities</b>	<b>94</b>
<b>3.4</b>	<b>Use of health services</b>	<b>95</b>
<b>3.5</b>	<b>Financing and expenditures</b>	<b>95</b>
<b>3.6</b>	<b>International health</b>	<b>96</b>

---

## TABLES

3.1, 3.2	Life expectancy	97
3.3, 3.4	Infant deaths and stillbirths	98
3.5	Causes of death	99
3.6	Potential years of life lost	99
3.7	Health problems	100
3.8	Notifiable diseases	100
3.9, 3.10	Statistics on cancer	100
3.11, 3.14-3.16	Hospital statistics	102
3.12	Hospital beds in Canada	103
3.13, 3.18, 3.19	Patient-days in hospitals	104
3.17	Therapeutic abortions	107
3.20, 3.21	Psychiatric in-patients	109
3.22	Special care facilities	110
3.23, 3.24	Hospital expenditures	111
3.25	Physicians, population served	114
3.26	Licensed dentists	115
3.27	Registered optometrists	115
3.28	Registered nurses	116
3.29	Licensed pharmacists	116
3.30	Hospital personnel	117
3.31-3.35	Health expenditures	117

## CHARTS

Chart 3.1	Life expectancy and infant mortality	87
Chart 3.2	Physical activity levels	93

## CHAPTER 3

# HEALTH

### 3.1 Health status

Most Canadians enjoy a quality of life equal to or better than that of the people of most other countries. The burden of ill-health on individuals has eased enormously over the past 50 years, and many infectious diseases that were once prevalent have been virtually eliminated.

Overall mortality rates have significantly declined since early in the 20th century. As Canada moved into public insurance coverage of health care services, there was a further decline in specific areas. The leading causes of death are cardiovascular diseases, cancer and accidents. Hospital morbidity data reinforce the need for dealing with these causes — heart disease, stroke, cancer, accidents and respiratory disease. They also point out the considerable burden of ill-health imposed by mental disorders.

The health problems Canadians live with, quite different from those which result in death, include arthritis and rheumatism, disorders of back, limbs and joints, mental disorders, allergies, and dental trouble.

To improve significantly the health status of Canadians, future emphasis will be on the reduction of risks to health and the early detection of health problems. Improvements in the rehabilitation of people afflicted by disease or handicap would contribute to their well-being and quality of life.

To obtain information on the health status and risk exposure of the Canadian population, for use in program planning and policy development, the federal government carried out a Canada health survey in 1978-79 as a joint project of the national health and welfare department (NHW) and Statistics Canada.

The survey considered not just diseases and disability but lifestyle, environment and socio-economic factors. Information came from interviews and questionnaires. About 12,000 homes (38,000 individuals) were visited. *The health of Canadians: report of the Canada Health Survey* was released in July 1981. Computer tapes of the data base are available to users.

The survey was influenced by the guidelines spelled out in *A new perspective on the health of Canadians*, an NHW working document published in 1974. This approach to health planning is in line with

the program and policy initiative of the World Health Organization, *Health for all by the year 2000*, which Canada endorsed. For Canada, this means that the development of new social policy will emphasize specific groups, such as the elderly, the handicapped, native peoples, low-income persons, and those with specific conditions, and to priority health problems affecting Canadians. It was planned that the Canadian health system would be geared to these priorities during the 1980s.

#### 3.1.1 Life expectancy

Life expectancy at birth, or mean length of life, is a convenient way of summarizing the state of mortality and is to some extent an indicator of the population's overall health status. High life expectancy attained in industrialized nations attests to the success of the battle against infectious diseases, which were primarily a threat during the first year of life.

Canada has a high average life expectancy for both males and females. It reached 71.9 years for males and 79.0 for females in 1981 (Tables 3.1 and 3.2), with a life expectancy differential by sex of 7.1 years in 1981. This difference is reflected in lower death rates for women at all ages.

**Infant mortality.** A major reason for the overall increase in life expectancy at birth is the drop in infant mortality. Death rates for infants under one year of age declined about 76% between 1951 and 1982. Improvement is due to better health care before and after birth, improved nutrition and living standards and a decline in the number of children born to older mothers. However, the death rate in recent years was still 20% to 24% higher for male infants than for females.

The primary change since 1931 has been not so much the length of old age as the proportion of the population reaching this level. Under prevailing conditions in 1931, 66% of the male population could expect to reach the age of 60; by 1981 the proportion had increased to 83%; the corresponding figures for females were 68% and 90%. (*Perspectives on health*, Statistics Canada Catalogue 82-540E February 1983 and *Life tables, Canada and provinces*, Statistics Canada 84-532 June 1984.)

### 3.1.2 Causes of death

Apart from accidents and violence, the main causes of death are diseases related to degenerative processes such as arteriosclerosis and tumours. This is essentially what distinguishes mortality of today from that of the turn of the century, when infectious diseases were the leading cause of death.

Analysis of causes of death by age group shows that in 1978, accidents, violence and suicide accounted for 55% of deaths for the age group 1-14, for 80% of deaths between ages 15 to 24 and for 46% of deaths between ages 25 to 44. Cancer was the second leading cause up to age 44, followed closely by diseases of the heart and circulatory system. Death rates for males in the various age groups up to age 80 were higher than those for females: in the age group 15-24, the death rate for males was three times as great as for females, and between ages 25 and 44 it was twice as great.

In 1982, accidents again accounted for the greatest number of deaths for persons of 1-44 years, but cardiovascular diseases were the leading cause for persons of 45 years and over, and accounted for more than 80,000 deaths at all ages (Table 3.5).

**Potential years of life lost (PYLL)** is a useful indicator of premature deaths. It allows heavier weight to be given to deaths occurring at a younger age. This calculation is applied only to deaths occurring between the 1st and 70th birthdays, multiplying the number of deaths in a specific age group by the remaining years of life to age 70. Analysis of this calculation for a few causes of death in 1978 (Table 3.6) varies considering the number of deaths or the corresponding number of years of life lost. Close to 40% of all years lost between the 1st and 70th birthdays are lost because of accidents and violent acts, the latter being more prevalent among males (about 40% of the PYLL) than among females (close to 30%). Ischemic heart diseases are responsible for 25.4% of the deaths between the ages of one and 70, but only 15.0% of PYLL, whereas traffic accidents account for a comparable number of PYLL but only 6.5% of deaths. Accidents of all types accounted for 27% of the PYLL.

The rate of PYLL can be used to make comparisons in time or between two populations. This is another way of showing the decline in premature mortality: for every 1,000 persons aged one to 70 in 1978, 57 years of life were lost prematurely, down from 84 in 1950.

### 3.1.3 Morbidity and disability

The measure used to express morbidity is patient-days in general and allied special hospitals. The leading causes of hospitalization in 1979-80 were heart disease, mental disorder, stroke, accidents and respiratory disease.

For babies up to a year old, respiratory diseases accounted for 29% of hospital days, and were the leading cause of hospitalization. For children of

1-14 years the leading causes were respiratory diseases and accidents.

Childbirth, accidents and mental disorder are the three main reasons why Canadians from 15 to 44 years old are admitted to hospital. In the next age group, 45-64 years, heart disease leads with 10% of hospital days. Next are mental disorder and disease of the nervous system.

Among the elderly the leading causes of hospitalization are heart disease, stroke and respiratory disease (Table 3.13).

The Canada Health Survey estimated that the normal activity of 2.7 million Canadians, or 12% of the population, was limited because of ill-health. Activity limitation is defined as the inability of a person to carry out normal activities such as working, housekeeping or going to school, due to physical or mental incapacity. Major causes of activity limitation were: limb and joint disorder, heart disease, arthritis and rheumatism, trauma, mental disorder, asthma and hypertension. Over half the population surveyed reported at least one health problem. More health problems were reported for the older groups and proportionally more women than men reported multiple problems (Table 3.7).

### 3.1.4 Specific health conditions

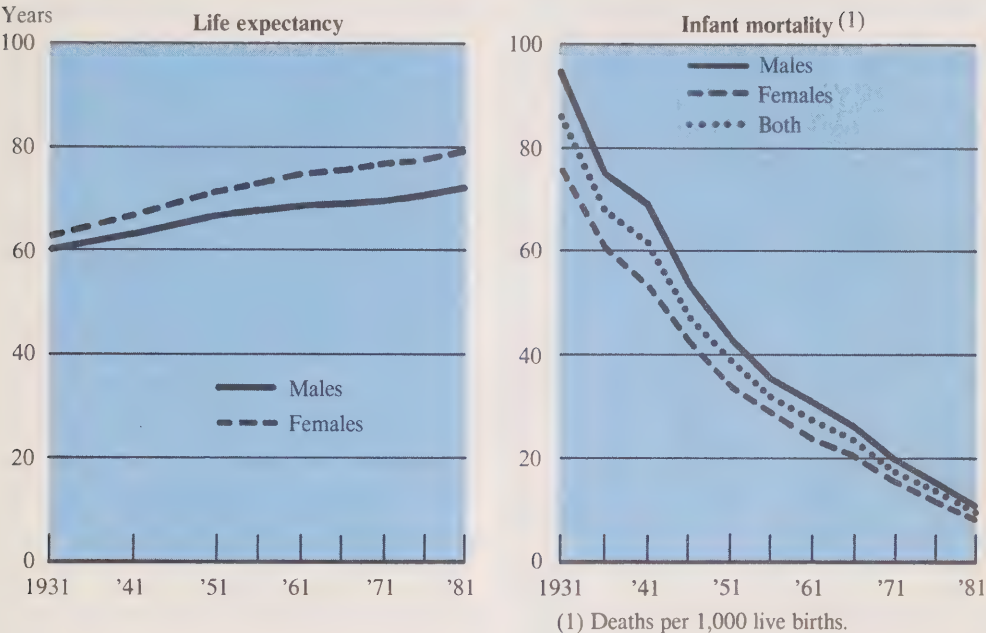
**Mental disorder** is treated both in mental institutions and in the psychiatric units of general hospitals and in 1979-80 accounted for 8.7% of all patient-days. Although the role of general hospitals in treating mental disorder is often not recognized, nearly as many days are spent for mental disorder in general hospitals as in mental institutions. Women are more likely than men to be treated in general hospitals, particularly for neuroses and personality disorders.

Neuroses account for 7.8% of patient-days for psychiatric conditions. Schizophrenia is a close second at 28.5% and psychoses third at 17.6%. Half the patient-days for neuroses and one-third for psychoses are spent in general hospitals, and about 90% of patient-days for schizophrenia in mental institutions. Only a small proportion of patient-days for mental retardation is spent in general hospitals.

For women, the two most important causes of patient-days and for admissions are schizophrenia and mental retardation. Men experience the largest number of patient-days for schizophrenia, followed by mental retardation and psychoses. This contrasts with admission data which show alcoholism as the most important cause.

**Heart disease** caused one of every three deaths in 1978. Over the past decade, death rates have been gradually declining. The Canada Health Survey showed that about 800,000 Canadians had heart problems in 1979; over half were persons of working age. It was estimated that heart problems caused 300,000 persons to be restricted in their daily activities and over 100,000 persons to have

Chart 3.1  
Trends in life expectancy and infant mortality, 1931-81



disability days. Over 200,000 patients separated from hospital in 1978 were treated for heart disease. **Cancer** accounted for more than one of every five deaths; 40% of persons who died were in their working years or younger. Over the previous decade the death rate gradually increased due largely to a 50% increase in deaths from cancer of the respiratory system. Over 220,000 patients treated for active or suspected cancer were separated from hospital in 1978.

**Respiratory diseases** have had a relatively stable overall pattern with a small increase proportionate to the population increase. These diseases strike at all ages, though 78% of fatal illnesses occur after age 65. The average hospital stay is seven to eight days. Nearly twice as many men as women die from respiratory disease, largely due to the much higher male death rate from the category bronchitis, emphysema and asthma.

From the Canada Health Survey, it was estimated that more than one in 10 Canadians had a respiratory problem during 1979. Respiratory conditions were more prevalent among males in childhood and old age, but in the working age population occurrence was higher among women.

**Fatal cerebrovascular disease (stroke)** is primarily a condition of old age, with only 15% of deaths

occurring before age 65. Deaths among men are more common at earlier ages, but elderly women over age 75 account for a large proportion of deaths from this condition. While the death rate declined slightly in the previous 10 years, the rate of hospital care increased by almost one-third. More men than women are admitted to hospital, but the days of care provided in hospital for women suffering from stroke exceeds that for men by over 30%.

**Accidents and violence.** Reliable data on morbidity in traffic accidents are unavailable. The morbid states may vary considerably, from a simple fracture to total paralysis, but the statistics do not show such distinctions. However, for every person killed in a traffic accident in 1975, approximately 36 were injured.

**Alcoholism.** While drunkenness increases primarily the risks of morbidity, mortality and disability due to accidents, the alcoholic is exposed to a wide variety of other risks which may damage physical and mental health, such as cirrhosis, the onset of various cancers, social conflicts with family and others, occupational hazards such as industrial accidents, drop in performance, loss of employment, alcoholic psychoses and suicide.

There were an estimated 635,000 alcoholics in 1978, a total more than doubled since 1965. An

estimated 1.4 million persons, or one adult drinker in 10, suffer from an alcoholic-related handicap.

Data indicate that in 1978 alcohol consumption was the direct cause of 2,520 deaths and the indirect cause of 5,668 others such as in traffic accidents and falls. There is evidence that alcohol may have been a factor in 10,142 other deaths with medical diagnosis such as coronary and respiratory diseases and various types of cancers. Thus a total of more than 18,000 deaths in 1978, or 10.9% of all deaths in Canada have been linked with alcohol consumption (*Special report on alcohol statistics*, National Health and Welfare and Supply and Services Canada, 1981).

**Notifiable diseases** are communicable diseases which physicians are required by law to report so that public health officials are aware of possible epidemics and may determine the effectiveness of public health programs such as immunization. These data are limited: they represent cases, not individuals; they do not include the impact on an individual, except for the mortality figures; and reporting practices vary from physician to physician and province to province.

The five most frequently reported in 1982 were venereal diseases, salmonella, tuberculosis, hepatitis and measles (Table 3.8).

Venereal disease rates have increased in recent years to over 200 cases per 100,000 people, twice the rate of the 1950s and 1960s. But deaths due to venereal diseases have declined steadily since the introduction of antibiotics after World War II. Not included in these figures, but also of concern to public health officials, is the spread of herpes II virus.

Deaths from notifiable diseases decreased as a proportion of all deaths from 0.8% in 1959 to 0.6% in 1978. This indicates in part the effectiveness of public health programs in treating and controlling communicable diseases. The decline in both the incidence and number of deaths associated with tuberculosis in the last 50 years is one of the success stories of public health. Yet tuberculosis is still the leading cause of death among the notifiable diseases.

## 3.2 Canadian health system

### 3.2.1 Government responsibility

Governmental involvement in health care services in 1867, at Confederation, was minimal. For the most part, the individual was compelled to rely on his own resources and those of his family group, and hospitals were administered and financed by private charities and religious organizations.

The only specific references to health matters in the distribution of legislative powers under the Constitution Act, 1867 (formerly named the British North America Act, 1867) allocated to the federal Parliament jurisdiction over quarantine and the establishment and maintenance of marine hospitals and to the provincial legislatures jurisdiction over the

establishment, maintenance and management of hospitals, asylums, charities and charitable institutions in and for the province, other than marine hospitals. This probably was meant to cover most health care services. Since the provinces were also assigned jurisdiction over all matters generally of a local or private nature in the province, it is probable that this power covers health care, while the provincial power over municipal institutions provided a convenient means for dealing with such matters.

In addition to the powers of the federal Parliament to legislate in certain areas, the constitution gave it the power to spend the consolidated revenue fund on any object, providing the legislation authorizing the expenditures did not amount to a regulatory scheme falling within provincial powers. The spending power of the federal Parliament enabled it to make payments to provinces and persons in fields where it had little or no regulatory authority: for example, hospital and medical care insurance programs, health resources fund, health grants programs, and fitness and amateur sport. It also enabled the federal government to undertake research and to provide information and consultative services.

Responsibility for health in Canada is thus shared between the federal and provincial governments. At the federal level Health and Welfare Canada is the principal agency for health matters. Its main objectives are to maintain and improve the quality of life of the Canadian people, including their physical, economic and social well-being. These objectives are pursued in conjunction with other federal agencies and with provincial and local governments. The provision of most health care services has been traditionally acknowledged as primarily a provincial responsibility and provincial governments are directly responsible for provision of these services.

**Federal-provincial co-operation.** Since the federal and provincial governments share responsibility for health, a formal structure has been established for federal-provincial co-operation. It comprises the following: conference of ministers of health; conference of deputy ministers of health; and federal-provincial advisory committees on institutional and medical services, community care services, international health affairs, health promotion and lifestyle, health manpower and environmental and occupational health. The conferences of ministers and deputy ministers of health convene periodically to discuss matters of promotion, protection, maintenance and restoration of the health of Canadians. For instance, federal, provincial and territorial ministers met in 1982 to discuss proposals to lead to a new health act, to replace the Hospital Insurance and Diagnostic Services Act and the Medical Care Act. The advisory committees and the conferences of ministers and deputy ministers may set up ad hoc working groups to deal with particular subjects requiring more detailed study.

The federal government is responsible for providing for the health needs of Indians and Inuit, public servants, certain groups of immigrants and refugees and residents of the Northwest Territories and Yukon. NHW provides diagnosis, treatment and preventive health services, prosthetic services, civil aviation medicine, health services in both peacetime and wartime emergencies, quarantine and regulatory inspection of arrivals to Canada, and immigration medical services.

In addition, under the Canada Assistance Plan, the federal government pays 50% of the cost of various health and social services to persons in need. This program was enacted in 1966 to complement other health and welfare programs and is administered by provincial governments. Health benefits vary from province to province, but generally include such services as eyeglasses, prosthetic appliances, dental services, prescribed drugs, home care services, and nursing home care.

### 3.2.2 Health insurance plans

Canada does not have a single national health insurance plan. Instead, nationwide health insurance is achieved through a series of interlocking provincial plans, all sharing common elements. To qualify for federal financial support, provincial hospital and medical care insurance plans must meet minimum criteria of federal legislation: comprehensiveness of coverage of services, universal population coverage, reasonable accessibility to services, portability of benefits, and non-profit plan administration by a public agency. The plans are designed to ensure that all residents of Canada have access, on a prepaid basis, to needed medical and hospital care.

Federal participation in the national health insurance programs has been governed by provisions of the Hospital Insurance and Diagnostic Services Act, 1957, the Medical Care Act, 1966-67, and the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977.

**Hospital insurance.** The Hospital Insurance and Diagnostic Services Act, 1957, which came into effect in July 1958 was designed to make available to all eligible residents a wide range of hospital and diagnostic services at little or no direct cost to the patient, thereby removing financial barriers to adequate care. The purpose of the act was to establish and maintain services and facilities leading to better health and health care for the population as a whole, by providing hospital care and diagnostic services.

All provinces and territories have participated in the national program since 1961. Over 99% of the population is covered by hospital insurance. The programs include acute, general, chronic and convalescent hospitals. Excluded are hospitals for the mentally ill, tuberculosis sanatoria, and nursing homes or institutions whose primary purpose is custodial care. Insured hospital services vary from

province to province, but a fairly comprehensive range is provided in all provinces. Additional benefits may be included in the plans without affecting the federal-provincial agreements, such as extended nursing home care and home care.

The individual may select the hospital in which he or she is treated provided the physician has admitting privileges and provided the services rendered by a hospital are medically necessary. During a temporary absence, coverage is portable anywhere in the world for emergency in-patient services, and in most provinces for out-patient services also. Benefits are subject to provincially regulated maxima for rates of payment, length of hospital stay and, in cases of non-emergency services, prior approval by the provincial plan.

The principles of availability and portability of benefits are reflected in provisions of each provincial insurance plan. Although the plans in general stipulate a waiting period of three months, coverage may continue from the province of previous residence. First-day coverage is generally provided for the newborn, immigrants, and certain other categories of persons without prior coverage in other provinces. A health insurance supplementary fund has been established for residents who have been unable to obtain coverage or who have lost coverage through no fault of their own.

**Medical care insurance.** The Medical Care Act, 1966-67 authorized the federal government to make payments to provinces which operate medical care insurance plans meeting certain minimum criteria: comprehensive coverage for all medically required services rendered by a physician or surgeon, universal availability to all eligible residents of a province and covering at least 95% of the eligible population, reasonable access to insured services, portability of benefits for beneficiaries temporarily absent from their own province or moving to another one, and administration on a non-profit basis by public authority.

Federal contributions became payable in July 1968. By early 1972, all 10 provinces and both northern territories had met the federal criteria. Since then, virtually the entire eligible population has been insured for all medically required services of physicians, plus a limited range of surgical-dental services in hospitals. Services by physicians that are not medically required are not covered, such as examinations for life insurance. Also excluded are services to treat work-related conditions already covered by worker compensation or other federal legislation.

There can be no dollar limit or exclusion except when a service is not medically required. The federal program includes services traditionally covered as benefits by the health insurance industry, and also preventive and curative services traditionally covered through the public sector in each province, such as

medical care of patients in mental and tuberculosis hospitals and preventive services provided to individuals by physicians in public health agencies.

A uniform terms and conditions clause is intended to ensure that all residents have unimpeded access to insured services. This condition prevents discrimination because of health, age, non-membership in a group, or other considerations. If a premium system of financing is selected, subsidization in whole or in part for low-income groups is permitted. The individual province may determine whether insurance will be voluntary or compulsory.

Utilization charges at the time of service are not precluded by the federal legislation if they do not impede, either by their amount or by the manner of their applications, reasonable access to necessary medical care, particularly for low-income groups.

**Provincial and territorial plans.** Methods of organizing, financing and administering health insurance plans vary. In some provinces, hospital and medical care plans are administered directly by provincial departments of health. In others, the plans are under separate public agencies reporting directly to the responsible provincial minister. Some provinces have one plan administered by the department of health and the other by a public agency.

Until 1977, the federal government reimbursed the provinces for about 50% of approved expenditures for services provided under the provincial hospital and medical care insurance plans. With the introduction of established programs financing legislation in April 1977, the federal contributions to the provinces were no longer tied to provincial spending but to the average rate of growth in gross national product. Contributions took the form of a cash transfer plus a transfer of tax and associated equalization payments to the provinces. Provinces must continue to meet criteria under federal legislation to be eligible for financing. Per capita cash contributions were also made to the provinces toward the cost of certain extended health care services, such as nursing home, adult residential, ambulatory and home care services. Methods of administering and financing these programs in each province and the provision of associated services are left to the provinces.

Each province is free to determine how its share of the cost will be financed. Most provinces finance their share out of general revenue, while three (Ontario, Alberta and British Columbia) and Yukon impose premiums. In Ontario both hospital and medical coverage are linked to premiums. In British Columbia, premiums are applied only to medical care insurance. Premium assistance is available in these provinces for certain categories of residents with limited income, and premium exemption is provided in Alberta and Ontario for most residents over 65 years of age. Some provinces levy limited

user charges to some patients in general and allied special hospitals.

Arrangements vary for delivery of medical services and payment of physicians. Most physicians are paid on a fee-for-service basis. This accounts for about 94% of the cost of insured medical services nationally. Other arrangements include salary, sessional payments, contract service, capitation and monetary incentives to settle and remain in medically underserved areas. For physicians remunerated on a fee-for-service basis, four broad categories of arrangements exist. Within these categories, each province has certain features which distinguish it from others. In the four types of arrangement, physicians may:

- participate in the provincial plan and not be allowed to bill beyond provincial plan benefit levels, or not participate and bill patients as they see fit, but their patients are no longer entitled to plan benefits (Quebec);

- choose to opt-in and bill the provincial plan for all patients or opt-out for all patients and bill the patients. Only the opted-out physicians are free to bill patients beyond the provincial plan benefit levels. Patients of opted-out physicians do not lose entitlement to benefits (Ontario, Manitoba, Newfoundland, British Columbia, Yukon, Northwest Territories);

- bill the plan for some services and for some patients, or bill the patient for some or all of the services provided. The physician is not allowed to bill both the plan and the patient for the same service. Billing beyond the provincial benefit levels may occur only for services billed to patients. Patients can be reimbursed up to the provincial benefit level (Saskatchewan, New Brunswick, Prince Edward Island); and

- bill either the plan or the patient or both for any service. A patient billed beyond the provincial benefit levels can be reimbursed up to that level (Alberta, Nova Scotia).

### 3.2.3 Health protection

Federal and provincial programs protect the public against unsafe foods, drugs, cosmetics, and medical and radiation-emitting devices, against harmful microbiological agents, technological and social environments, against environmental pollutants and contaminants, and against fraudulent drugs and devices.

**Food safety,** cleanliness and nutritional quality standards are developed through laboratory research and evaluation of data produced by private and public sectors, and international sources. Standards are maintained by inspection and analysis of foods of both domestic and imported origin. Regulations prescribe maximum levels for residue of agricultural chemicals in foods and use of food additives. Both are subject to pre-market evaluation before they can be used in a food sold in Canada.

**Drugs.** On the principle that Canadians should have access to drugs that are both safe and effective, new drugs are cleared for marketing and post-marketing surveillance is maintained. Manufacturers of new drugs with unknown properties are required by law to submit evidence of the safety and effectiveness of their products, including information about therapeutic properties and side effects.

**Environmental health.** Responsibilities include studying adverse effects on human health of the chemical and physical environment, and ensuring the safety, effectiveness, and non-fraudulent nature of medical devices. Health hazard assessments are developed for work and home environments, household products, air and water. Research is conducted on radiation hazards, and adverse effects of environmental chemicals.

**Disease control.** A laboratory centre in the health and welfare department is developing improved diagnostic procedures and other measures to combat communicable disease agents, and is producing and distributing standardized diagnostic reagents to federal, provincial and other health organizations. A national reference service is provided to identify disease-producing bacteria, viruses and parasites. A co-operative federal-provincial program assures laboratory quality and proficiency testing. Communicable disease control is addressed through epidemic outbreak investigations, seasonal surveillance of influenza, monitoring of sexually transmitted diseases and newly emerging conditions such as toxic shock syndrome and acquired immune deficiency syndrome. Surveillance is maintained of birth defects, cancer, cardiovascular diseases, poisoning and adverse drug reaction.

### 3.2.4 Public health and community health

Health departments, in co-operation with regional and local health authorities, administer such services as environmental sanitation, communicable disease control, maternal and child health, school health, nutrition, dental health, occupational health, public health laboratories and vital statistics. Most provinces have delegated certain responsibilities to health units in rural regions and to municipal health departments in urban centres. Several provinces provide services directly to their thinly populated northern areas.

**Maternal and child health.** Consultant services of health departments co-operate with the public health nursing services. The maternal and child health services also undertake studies and help train nursing personnel. At the local level, public health nurses provide services to mothers, the newborn and children through clinics, home and hospital visits and school health services.

**Nutrition and health education.** Health departments and some municipal or regional health offices employ nutrition consultants to extend guidance to

health and welfare agencies, schools, nursing homes, various community service agencies and other institutions and hospitals. They provide diet counselling to selected patient groups such as diabetics, and conduct nutritional surveys and other research. Most provincial health departments have a division or unit of health education. Many educational activities are directed to accident prevention and to changing habits harmful to health, such as smoking and the excessive use of alcohol and other drugs.

**Dental health.** Public health programs have been largely preventive, but emphasis is now being given to dental treatment. Dental clinics conducted by local health services are generally restricted to pre-school and younger school-age groups. A number of provinces send dental teams to remote areas. All provinces have dental care schemes of varying coverage for welfare recipients. Other dental health programs are directed to training dentists, dental hygienists, nurses, therapists and assistants, conducting dental surveys and extending water fluoridation.

**Communicable disease control.** The larger provincial health departments have divisions of communicable disease control. In others this function is combined with one or more community health services. Local health authorities organize public clinics for immunization against diphtheria, tetanus, poliomyelitis, whooping cough, rubella and measles.

**Public health laboratories.** Most provinces maintain a central public health laboratory and have branch laboratories to assist local health agencies and the medical profession in protection of community health and control of infectious diseases. Public health bacteriology (testing of milk, water and food), diagnostic bacteriology and pathology are the principal functions of the laboratory service, together with medical testing for physicians and hospitals.

**Rehabilitation and home care.** Rehabilitation services are provided by public and voluntary agencies in several types of institution, including hospitals, separate in-patient facilities, worker compensation board centres, and out-patient centres. Financing is from various federal, provincial and voluntary agency sources. Every province includes some institution-based services under hospital and medical care insurance. In some provinces coverage is extended to the supply and fitting of certain prosthetic and corrective devices.

Home care has developed in a variety of ways. Some programs are oriented to specific disease categories. Some are attached to specific hospitals or community centres. Others are integral parts of comprehensive health care delivery systems. The range of services varies from nursing services alone to a complete array of health and social services. Some programs concentrate on patients requiring short-term active treatment. Others treat convalescent or

chronic patients. The objectives are the reduction of institutional costs and length of stay, and continuity of care and provision of co-ordinated health care services to patients for whom home care is the most appropriate level of care.

Most home care programs have two features: centralized control and co-ordinated services to meet the changing needs of the patient. In some provinces the departments of health play an active role in financing and administration of home care programs. In others local agencies, municipalities and hospitals assume major responsibility for home care.

Special schools or classes for various groups of handicapped children are usually operated by school boards. Most schools for the deaf and for the blind are residential schools operated by provincial governments.

A program for the vocational rehabilitation of disabled persons, initiated in 1952, has been administered by NHW since April 1973. The federal government shares the costs incurred by the provinces in providing comprehensive services for vocational rehabilitation of physically and mentally disabled persons. Services include social and vocational assessment, counselling, training, maintenance allowances, provision of tools, books and other equipment, remedial and restorative treatments, and provision of prosthetic and orthotic appliances, wheelchairs, and other mobility aids.

### 3.2.5 Health promotion and physical activity

Significant gains, in terms of increased longevity and reduced prevalence of sickness and disability, could arise from improvements in the physical environment and changes in individual behaviour. Promotion of healthy lifestyles and accessibility of community health services are emphasized by the various health departments. Health promotion programs are, for instance, aimed at producing a generation of non-smokers, reducing alcohol consumption, changing nutritional practices, reducing drug use, reducing risks of accidents, increasing emphasis on fitness and exercise and improving parenting and other aspects of family life.

Several factors suggest that health promotion in the mental health field will become a salient issue in the future. An increasingly stressful environment could be reflected in increased mental health problems. Both the individuals concerned and the community sector should be made aware of this problem and provide support in coping with it.

Federal and provincial governments co-operate on programs such as a national alcohol information program and a long-range plan carried on in co-operation with a council on smoking and health.

Efforts have been made to reach people at all levels. Trainer workshops have been held for addiction workers. NHW has developed a basic training system in alcohol and drug services. Television programs and public service announce-

ments have been produced on nutrition, health and fitness. Plans for future directions in health promotion include emphasis on programming in self-care and stress.

The physical activity index of the Canada Health Survey showed that the proportion of persons who were very active declines with age. While 46% of men and 32% of women aged 15-19 were classified as very active, this proportion declined to only 11% of men and 5% of women aged 65 and over.

**Physical activity.** A Canada fitness survey was undertaken in 1981 by Fitness and Amateur Sport Canada to assess fitness levels of a representative cross-section of the population. More than 20,000 Canadians answered detailed questions on their activity patterns, and more than 15,000 took fitness tests.

More than three out of every four (77%) in the sample aged 14 years and over reported participating in some sport over the last 12 months, while 66% took part in exercises, including walking, jogging, cycling, calisthenics and exercise classes in the previous month. Sport participation was up from 54% in 1976, when activity patterns were studied in a similar survey. Thus an additional 23% of the population was active in sports, not counting those who were limited by chronic injury or illness. In contrast to sports, proportionate participation in exercise activities had changed little since 1976 when it was 63%.

Sports were the preference of males, while exercise activities were the choice of females. Sport participation drops drastically with advancing age, while exercise participation is more stable. Nevertheless, a majority reported remaining active up to age 55.

Compared with 1976, there were large increases in the number wanting to begin jogging, calisthenics, cycling, walking, running and racquetball. Lack of time due to work was the main reason people cited for not increasing their activity levels.

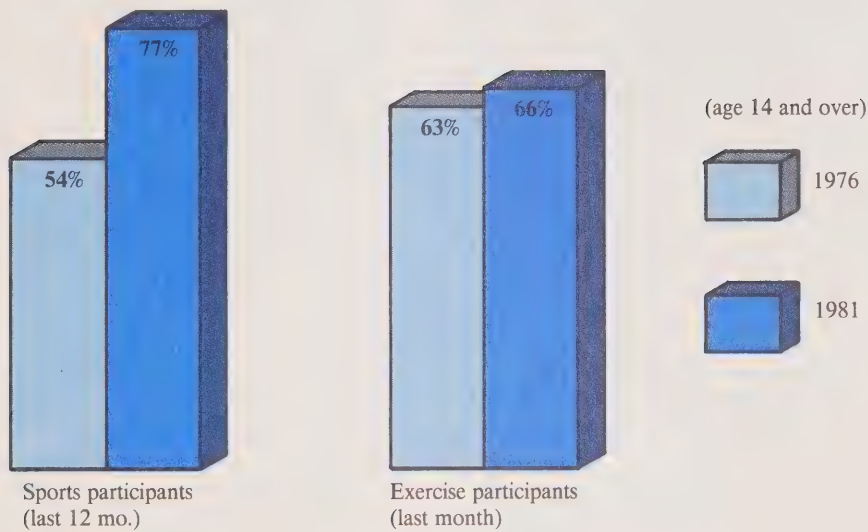
Fitness Canada seeks to increase awareness of the importance of fitness and encourage greater participation in physical activity. It provides support to some 400 projects conducted by more than 100 national organizations. Projects promote and develop physical activity programs for all Canadians including the disabled and the poor.

### 3.2.6 Voluntary agencies

Health is one field in which voluntary agencies are most involved. Health departments in Canada recognize and support the intrinsic worth of voluntary action in developing and providing services to promote health and well-being. Historically, voluntary groups have played a major role in promoting public awareness and action leading to the development of Canadian health systems and social services. The voluntary sector, with its grassroots involvement, is in a position to be aware of emerging problems, evolve innovative responses and mobilize

Chart 3.2  
**Physical activity levels**

Proportion of able-bodied in sample



rapidly to meet perceived human needs. Thus the work of the voluntary sector is complementary to government efforts. The annual value of volunteer labour is estimated at about \$1 billion in the health and social services sector. In 1982 NHW provided sustaining grants to 31 national voluntary organizations.

**3.2.7 Research and planning**

Total expenditures for health science research and related scientific activities in Canada in 1982 were estimated at more than \$700 million. Federal contributions were estimated at \$340 million.

**Scientific activities related to health.** Responsibility for funding scientific activities is shared among the federal government, private non-profit organizations, private industry and provincial governments. Basic and applied biomedical research is funded primarily by the Medical Research Council of Canada, a variety of non-profit organizations, such as the Canadian Cancer Society, and several provincial research-funding programs. Most of this research is performed in universities and affiliated teaching hospitals. Applied health research, including the development of health care delivery systems, is funded by NHW and by other organizations, both provincial and private. The provinces not only provide some funds for the direct costs of activities

carried out in universities and hospitals but also, through operating grants, provide for indirect costs including the salaries of principal investigators. Part of these operating grants, in turn, is paid for by the federal government through established program financing for secondary education. Related activities include the training of research scientists, scientific data collection, information dissemination, economic and feasibility studies and testing and standardization.

**Principal performers.** In federal laboratories, work is connected with standards and regulations to safeguard the quality and safety of foods, cosmetics, drinking water and air, and the safety and effectiveness of drugs and medical devices. Surveillance is maintained over chronic and infectious diseases; factors affecting their diagnosis and containment are investigated. In universities, most investigations concern physiological and biochemical bases of health and disease. In hospitals, diseases and disabilities are investigated; treatments (both medical and surgical) are developed and tested. In industry new pharmaceuticals and medical devices are developed. New technologies are developed and tested ranging from hardware, such as medical devices, to strategies for the management of certain medical conditions, such as provision of special care units. Health concerns include: the improvement of

lifestyles and self-management of health, reproductive health, occupational health, mental health, and the special health problems of particular population groups, such as the elderly, northern residents, native peoples, and the disabled.

**Medical Research Council.** Most federal grants supporting health science research in universities and hospitals are channelled through this council. It provides grants-in-aid of operating and equipment requirements for research projects and direct support for investigators and research trainees. It offers incentives for research both in productive fields where major contributions may be expected and in fields or regions where research is not adequately developed. Support is given for meetings, international scientific activities and exchange of scientists. The budget of the council was \$113 million for 1982-83, up from \$88 million for the fiscal year 1981-82.

**The national health research and development program** provided \$11 million for health research and related scientific activities in 1981-82. Among the 235 projects supported were investigations into the safety and quality of foods and pharmaceutical products, and the identification of chemical, physical and biological hazards in the home, workplace and community. Support was given to research related to the quality and availability of health services, and promotion of healthy lifestyles and behaviour patterns.

To meet a need for qualified health research manpower, the program assisted 50 students at the masters and doctoral levels and 55 established health research scientists.

### 3.3 Health personnel and facilities

In the 1980s, Canadians are being served by a system of hospital and medical care complemented by a broad range of other health services. Health workers include more than 45,000 physicians, 230,000 registered nurses, 11,000 licensed dentists and a large pool of other health professionals in such activities as diagnostic treatment, rehabilitation, public health and health promotion.

Services are provided in nearly 1,300 hospitals and more than 5,000 extended care facilities. The hospitals account for more than 50 million patient-days in a year and a substantial load of out-patient services.

**Physicians.** The number of active civilian physicians in Canada, including interns and residents, increased at a rate far exceeding population growth from 1971 to 1981 (Table 3.25). There was a 38% increase in the number of physicians while the population grew 12.8%. In 1981, 50.2% of the active civilian physician population, excluding interns and residents, were general practitioners and family physicians. The remaining 49.8% were certified specialists. As there was an almost identical percentage distribution

between general practitioners and family physicians and specialists in 1971, the tendency to specialize was no greater in 1981 than it was 10 years earlier.

A 38% increase in physicians from 1971 to 1981 can be attributed to two factors, the increasing number of medical graduates and the number of physicians immigrating to Canada. Prior to 1975, almost as many immigrant physicians as medical graduates in Canada were added to the stock each year. Since then the number immigrating has been decreasing and graduates from Canadian medical schools have increased.

The stock of physicians as it relates to the population reached 1:538 in 1981, surpassing a ratio set by a national physician requirements committee established by NHW. If general and family practitioners are examined as a separate group, there has been a surplus since 1975 when the recommended physician/population ratio was reached. Most medical specialists were at or above the recommended stock for 1981. In sharp contrast were surgical and other specialties which, with few exceptions, were not projected to reach the recommended physician/population ratio until after 1983.

**Dentists.** The number of active dentists increased 54.1% from 1971 to 1981, having kept far ahead of the population growth rate of 12.8% during the same period (Table 3.26). Canada had a dentist per 2,913 persons in 1971. The ratio was 1:2,133 in 1981. Dental schools played a large role in the increase. During the decade, two new dental schools were opened. Most schools had relatively stable numbers of graduates. Two exceptions were large increases in the number of graduates from the University of British Columbia and Western University.

**Nurses** represent about two-thirds of all health manpower in Canada and are an integral part of the health care system. Historically, nurses have been predominantly female (99.2% in 1970), but there has since been an increase in the number of male nurses and the percentage of female nurses has decreased slightly to approximately 98%.

Most nurses have always worked in hospitals or related institutions. The percentage working in hospitals remained relatively stable during 1970-78, increasing only slightly from 82% to 84.7%.

About 35% of nurses worked part-time (less than 35 hours per week) in 1981.

**Pharmacists.** The number of licensed pharmacists increased from 11,330 in 1971 to 17,039 in 1981 (Table 3.29). There were 683 graduates of pharmacy schools in 1981, 258 more than in 1971. Beginning in 1976, women graduating outnumbered men; 64% of all graduates of pharmacy schools in 1981 were women.

**Optometrists.** In 1981 there were 2,224 active optometrists in Canada or one to 11,016 persons. This was an increase from one per 13,784 persons in

1971 (Table 3.27). Graduating classes of the two schools of optometry were small in comparison with other professional health disciplines. In 1981, 38 people graduated from the University of Montreal School of Optometry, almost twice as many as in 1971. A total of 55 graduated in 1981 from the only other school, the University of Waterloo, an increase of 98% over the number of graduates in 1972.

**Facilities.** In 1980 there were 1,275 public hospitals operating and 4,743 special care facilities such as nursing homes and homes for the elderly (Tables 3.12 and 3.22). The rate of public hospital beds per 100,000 persons decreased 25% from 1970 to 1977-78 but there was an increase in the rated bed capacity in special care facilities and by 1982 the total number of these facilities had increased to 5,289.

### 3.4 Use of health services

**Hospital services.** Patients spent nearly 50 million days in public hospitals in the 1981-82 fiscal year, including more than 800,000 days in mental institutions. While the number of days spent in general and allied special hospitals had increased each year from 1978, the number of days spent in mental hospitals for the same period decreased. This was the result of extensive changes in the treatment locations for many mental patients and not a decrease in the prevalence of mental disorders (Table 3.18).

During the 1970s there was a change in emphasis toward integrating mental patients into the community instead of isolating them in institutions. This trend is reflected through shorter hospital stays, follow-up programs of out-patient visits to psychiatric clinics and special care facilities, and drug therapy.

The rate of patient-days in hospitals varied by sex and age. In the child-bearing years of the 15-24 and 25-44 age groups, the rate for women was double that for men. In the 45-64 year-old group, men had the higher rates, most likely because men suffer more heart ailments than women. After the age of 65, both men and women had a high rate of days of hospital care.

Length of stay in hospital also varied by age. Up to 44 years of age, people stayed in hospital for an average of one week. For the 45-64 year-old group, the average stay increased to 12.6 days in 1980-81. Patients 65 years old or more averaged 26 days in hospital at a time.

**Physician services.** There were approximately 94.3 million visits to physicians' offices, an average of four visits for each Canadian during 1978-79. On the average there were 280 physician consultations for every 1,000 Canadians, and 101 minor and 67 major surgeries performed for every 1,000 people.

From results of the Canada Health Survey it is estimated that the majority of Canadians (76.3%) made at least one visit to a medical doctor during 1978-79. Many had multiple visits. About 25% of respondents reported three to nine visits to a doctor and 9.4% had 10 or more. On the whole, women visited medical doctors in greater numbers and more frequently than men. About 81.3% of women reported at least one visit compared to 71.3% of men, and 40.8% of women had three or more visits contrasted with 29.2% of men. The proportion of multiple visits for elderly women was high with many having 10 or more visits.

**Dental services.** Canadians spent about \$1,500 million on dental care in 1981, slightly less than 6% of total health expenditures. About half the population visited a dentist during the year. The 5-14 year age group accounted for the greatest number of consultations.

A significant health care development since 1970 has been the growth of dental insurance. More than 6.5 million Canadians, 28.4% of the population, were insured by a third-party payment scheme in 1978.

### 3.5 Financing and expenditures

The overall cost of health in Canada, including expenditures by the private sector and by all levels of government, reached nearly \$30.1 billion in the calendar year 1982. That figure was up 16.8% from 1981, following annual increases of over 16% in each of the two previous years. The 1982 total was about 14 times higher than it had been in 1960. On a per person basis the 1982 total represented \$1,220, which was up by \$162 from 1981 and was more than double the per person total for 1975.

Health expenditures were taking an increasing proportion of the gross national product. From 5.6% in 1960, this share had risen quite steadily to 7.5% in 1971. For the next nine years it stayed between 7.0% and 7.5%, then rose to 8.4% in 1982 (Table 3.31).

**Categories of health service.** Health expenditures, when segregated by type of service being rendered, exhibit notable proportionate changes over time.

From 1960 on, hospitals have taken three-eighths or more of the health-care dollar. From 1960 when hospitals accounted for 38%, the proportion rose until 1975 when they took 47%, although there had been a brief decline between 1969 and 1971. After 1975 the proportion fell partly due to reclassification, reaching 41% in 1982.

Physician services varied between rather narrower limits. From 1960 until 1968 the proportion oscillated around 16%. It rose and attained a high point of nearly 17% in 1970. Four years of sharp decline followed, to 15% in 1976, with that proportion remaining almost unchanged over the ensuing six years.

Homes for special care accounted for 6% or 7% until 1970, rose to 9% of the total in 1975 and 14% in 1982. Part of this increase, perhaps as much as 2%, arose from a reclassification of institutions.

Other categories of health service varied less. Dental care accounted for 5% until 1977 and nearly 6% thereafter. Paramedical care took 1% each year from 1975 on. Drugs and appliances had taken 15% in 1960, were down to 11% in 1975 and remained at the 10% to 11% level until 1982. All other categories of health service (including public health, capital expenditure, research, and the administration of insurance plans) took almost 12% each year from 1975 until 1979, nearly 13% in the next two years and reverted to 12% in 1982.

**Government financing.** The introduction in Canada of governmental plans for the provision of health care (hospital care; physician services; and, under individual provincial governments, various other categories of health care) has significantly increased the government-financed share of the national health bill. In 1960 the governments were paying 42 cents of each dollar; in 1965, 52 cents; in 1970, 70 cents; in 1975 and 1976, 77 cents; and in 1981, 74 cents.

**Provincial distribution.** Total health costs per person in the provinces in 1982 ranged from \$1,390 in Alberta to \$1,070 in Newfoundland. British

Columbia (\$1,311), Manitoba (\$1,243) and Nova Scotia (\$1,267) were the only other provinces to exceed the \$1,220 national average, and the average for the territories was \$1,428.

### 3.6 International health

Through the federal health and welfare department, Canada is involved in the work of the Commonwealth ministers of health, the Pan-American Health Organization, the World Health Organization, other United Nations specialized agencies and other intergovernmental organizations whose programs have a substantial health component. Similarly, the department takes part in bilateral exchanges with other countries and belongs to several international social policy related organizations.

Each year Canadian experts in public health and in the health sciences undertake assignments abroad as special advisers or consultants at the request of the World Health Organization, the Pan-American Health Organization or one of the other agencies.

NHW enforces regulations under agreements between Canada and other countries. Other responsibilities include the custody and distribution of biological, vitamin and hormone standards and certain duties in connection with an international convention on narcotic drugs. Provincial departments and agencies are also involved.

#### Sources

Information Systems Directorate, Policy Planning and Information Branch, Department of National Health and Welfare (Elizabeth Payne, co-ordinator); Health Division, Statistics Canada.

#### Selected references

- Canada's food guide handbook (revised).* Health and Welfare Canada, Ottawa, 1982.
- Causes of death: provinces by sex and Canada by sex and age, detailed categories of the international classification of diseases (ICD).* Statistics Canada 84-203, Ottawa, 1984.
- Hospital annual statistics, 1981.* Statistics Canada 83-232, Ottawa, 1983.
- Life tables, Canada and provinces.* Statistics Canada 84-532, Ottawa, June 1984.
- Nutrient values of some common foods.* Health and Welfare Canada, Ottawa, Revised 1979.
- Perspectives on health.* Statistics Canada 82-540E, Ottawa, 1983.
- Shopping for food and nutrition.* Health and Welfare Canada, Ottawa, 1979.
- The health of Canadians: report of the Canada Health Survey.* Statistics Canada and Health and Welfare Canada. Statistics Canada 82-538E, Ottawa, 1981.

TABLES

.. not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed

e estimate

p preliminary

r revised

certain tables may not add due to rounding

3.1 Life expectancy, Canada

Year	Males				Females			
	At birth	20 years	40 years	60 years	At birth	20 years	40 years	60 years
1931	60.00	49.05	31.98	16.29	62.10	49.76	33.02	17.15
1941	62.96	49.57	31.87	16.06	66.30	51.76	33.99	17.62
1951	66.33	50.76	32.45	16.49	70.83	54.41	35.63	18.64
1956	67.61	51.19	32.74	16.54	72.92	55.80	36.69	19.34
1961	68.35	51.51	32.96	16.73	74.17	56.65	37.45	19.90
1966	68.75	51.50	33.01	16.81	75.18	57.37	38.15	20.58
1971	69.34	51.71	33.22	16.95	76.36	58.18	38.99	21.39
1976	70.19	52.09	33.59	17.23	77.48	58.95	39.67	21.96
1981	71.88	53.39	34.72	17.96	78.98	60.08	40.73	22.85
Gains								
(1931-76)	10.19	3.04	1.61	0.94	15.38	9.19	6.65	4.81
(1931-81)	11.88	4.34	2.74	1.67	16.88	10.32	7.71	5.70

3.2 Life expectancy at birth, selected countries

Country	Year	Males (M) years	Females (F) years	Difference F - M
Japan	1981	73.39	79.13	5.74
Sweden	1981	73.05	79.08	6.03
Switzerland	1977-78	72.00	78.70	6.70
Netherlands	1980	72.40	79.20	6.80
Denmark	1980-81	71.10	77.20	6.10
France	1978-80	70.05	78.20	8.15
Canada	1980-82	71.88	78.98	7.10
Spain	1975	70.41	76.21	5.80
Australia	1981	71.38	78.42	7.04
Israel	1981	72.70	75.81	3.21
United States	1979	69.90	77.80	7.90
England and Wales	1978-80	70.40	76.60	6.20
Cuba	1977-78	71.45	74.91	3.46
Italy	1974-77	69.69	75.91	6.22
Poland	1981	67.10	75.24	8.14
Portugal	1975	65.09	72.86	7.77

3.3 Infant mortality rate per 1,000 live births, Canada, 1921-82

Year	Male	Female	Both sexes	Year	Male	Female	Both sexes
1921	98.2	77.4	102.1	1952	42.5	33.6	38.2
1922	97.3	75.9	101.6	1953	39.8	31.0	35.6
1923	98.2	77.4	103.4	1954	35.8	27.9	31.9
1924	86.1	70.9	93.9	1955	35.0	27.5	31.3
1925	86.7	70.0	92.7	1956	35.0	28.7	31.9
1926	113.0	90.0	101.6	1957	34.5	27.2	30.9
1927	104.7	83.8	94.5	1958	33.7	26.4	30.2
1928	100.0	80.3	90.2	1959	31.8	24.7	28.4
1929	102.9	82.5	92.9	1960	30.8	23.7	27.3
1930	99.9	81.0	90.6	1961	30.5	23.7	27.2
1931	95.7	76.0	86.0	1962	30.6	24.3	27.6
1932	82.9	65.9	74.6	1963	29.6	22.9	26.3
1933	82.7	65.1	74.1	1964	27.8	21.4	24.7
1934	81.5	63.7	72.7	1965	26.2	20.8	23.6
1935	81.4	63.2	72.5	1966	25.8	20.2	23.1
1936	74.5	60.3	67.7	1967	24.2	19.6	22.0
1937	85.7	68.4	77.4	1968	22.9	18.6	20.8
1938	71.5	56.5	64.2	1969	21.7	16.9	19.3
1939	69.0	53.3	61.4	1970	21.2	16.3	18.8
1940	63.6	51.1	57.6	1971	19.9	15.1	17.5
1941	68.3	53.0	61.1	1972	19.1	15.0	17.1
1942	61.1	48.8	55.4	1973	17.4	13.6	15.5
1943	60.7	48.7	55.0	1974	16.6	13.4	15.0
1944	62.0	49.9	56.3	1975	15.9	12.6	14.3
1945	57.5	46.6	52.5	1976	15.0	11.9	13.5
1946	53.0	42.0	47.8	1977	13.5	11.2	12.4
1947	51.8	40.0	46.2	1978	13.3	10.5	12.0
1948	49.2	38.9	44.4	1979	12.2	9.5	10.9
1949	48.2	38.1	43.4	1980	11.6	9.2	10.4
1950	46.2	36.5	41.5	1981	10.8	8.4	9.6
1951	42.7	34.0	38.5	1982	10.3	7.8	9.1

3.4 Infant deaths and stillbirths, Canada

	Number						Rate					
	1977	1978	1979	1980	1981	1982	1977	1978	1979	1980	1981	1982
Infant deaths (less than 1 year)	4,475	4,289	3,994	3,868	3,562	3,401	12.4	12.0	10.9	10.4	9.6	9.1
Neonatal deaths (less than 28 days)												
Less than 7 days	2,590	2,435	2,244	2,092	2,037	1,873	7.2	6.8	6.1	5.6	5.4	5.0
7-27 days	304	453	408	378	322	346	0.8	1.3	1.1	1.0	0.9	0.9
Total	2,894	2,888	2,652	2,470	2,359	2,219	8.3	8.0	7.2	6.7	6.4	5.9
Post-neonatal deaths (28 days to 1 year)	1,491	1,401	1,342	1,398	1,203	1,166	4.1	3.9	3.7	3.8	3.2	3.1
Stillbirths (28+ weeks gestation)	2,437	2,236	2,101	1,952	1,972	1,923	6.7	6.2	5.7	5.3	5.3	5.2
Perinatal deaths (stillbirths plus deaths at less than 7 days) <sup>1</sup>	5,027	4,598	4,345	4,044	4,009	3,796	13.8	12.8	11.8	10.9	10.7	10.1

<sup>1</sup>Perinatal rates per 1,000 live- and still-born infants, all other rates per 1,000 live births.

3.5 Five leading causes of death<sup>1</sup>, by age group and sex, 1982

Cause	Total		Male		Female	
	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>	No.	Rate <sup>2</sup>
All ages						
Cardiovascular diseases	80,321	326.1	43,490	356.3	36,831	296.3
Cancer	41,946	170.3	23,436	192.0	18,508	148.9
Accidents	9,389	38.1	6,477	53.1	2,912	23.4
Pneumonia	5,247	21.3	2,727	22.3	2,520	20.3
Diabetes mellitus	3,022	12.3	1,328	10.9	1,694	13.6
Under 1 year <sup>3</sup>						
Causes of perinatal mortality	1,485	398.0	885	462.6	600	330.1
Congenital anomalies	997	267.2	561	293.2	436	239.9
Sudden death, cause unknown	644	172.6	399	208.6	245	134.8
Accidents	66	17.9	40	20.9	26	14.3
Pneumonia	63	16.9	38	19.9	25	13.8
1-4 years						
Accidents	261	18.3	171	23.3	90	12.9
Congenital anomalies	105	7.4	52	7.1	53	7.6
Cancer	66	4.6	33	4.5	33	4.7
Pneumonia	28	2.0	16	2.2	12	1.7
Cardiovascular diseases	18	1.3	11	1.5	7	1.0
5-19 years						
Accidents	1,490	25.2	1,097	36.2	393	13.6
Suicide	310	5.2	271	8.9	39	1.4
Cancer	289	4.9	167	5.5	122	4.2
Congenital anomalies	99	1.7	64	2.1	35	1.2
Cardiovascular diseases	78	1.3	46	1.5	32	1.1
Homicides	78	1.3	48	1.6	30	1.0
20-44 years						
Accidents	3,315	33.9	2,637	53.8	678	13.9
Cancer	2,107	21.5	930	19.0	1,177	24.1
Suicide	1,840	18.8	1,440	29.4	400	8.2
Cardiovascular diseases	1,662	17.0	1,182	24.1	480	9.8
Homicides	326	3.3	227	4.6	99	2.0
45-64 years						
Cardiovascular diseases	13,859	294.3	10,192	440.7	3,667	153.0
Cancer	13,313	282.7	7,333	317.1	5,980	249.5
Accidents	1,715	36.4	1,254	54.2	461	19.2
Chronic liver disease and cirrhosis	1,232	26.2	876	37.9	356	14.9
Suicide	978	20.8	715	30.9	263	11.0
65 years and over						
Cardiovascular diseases	64,677	2,660.7	32,046	3,091.9	32,631	2,340.2
Cancer	26,158	1,076.1	14,968	1,444.2	11,190	802.5
Pneumonia	4,550	187.2	2,308	222.7	2,242	160.8
Accidents	2,542	104.6	1,278	123.3	1,264	90.7
Diabetes mellitus	2,393	98.4	976	94.2	1,417	101.6

<sup>1</sup>Leading causes of death for both sexes but not necessarily the leading causes for male or female.<sup>2</sup>Per 100,000 population.<sup>3</sup>Per 100,000 live births.

## 3.6 Potential years of life lost (PYLL) by selected causes and sex, 1978

Cause of death	PYLL between 1 and 70 years				Deaths between 1 and 70 years (both sexes)	
	Males No.	Females No.	Total No.	%	No.	%
Motor vehicle accidents	142,049	48,650	190,699	15.2	4,762	6.5
Ischemic heart disease	149,740	38,388	188,128	15.0	18,607	25.4
Accidents (other than motor vehicle)	112,587	31,695	144,282	11.5	4,222	5.8
Suicide	80,693	22,995	103,688	8.3	3,237	4.4
Other causes	367,739	259,849	627,588	50.0	42,497	58.0
Total	852,808	401,577	1,254,385	100.0	73,325	100.0

3.7 Prevalence of health problems, by age group and sex, 1978-79<sup>1</sup>

Problem	Under 15 years		15-64 years		65+ years		All ages	
	Male	Female	Male	Female	Male	Female	Male	Female
Mental disorders	3.9	1.4	24.9	44.9	7.5	17.4	36.3	63.7
Diabetes	2.2	2.2	27.0	35.5	11.8	23.8	39.2	60.8
Thyroid disorders	—	—	8.1	69.3	5.0	17.0	13.7	86.3
Anemia	—	3.9	5.6	67.9	2.7	15.8	12.4	87.6
Headache	1.7	1.9	22.9	66.4	1.9	5.1	26.5	73.5
Sight disorders	3.7	4.3	25.4	40.1	8.4	18.1	37.5	62.5
Hearing disorders	6.4	6.0	31.8	21.6	20.8	13.4	59.0	41.0
Hypertension	—	—	26.5	36.1	11.4	26.0	37.9	62.1
Heart disease	—	0.8	28.0	23.5	21.5	25.0	50.6	49.4
Acute respiratory	21.0	20.0	22.6	32.1	1.8	2.4	45.4	54.6
Influenza	14.7	15.3	27.8	37.1	1.1	4.0	43.6	56.4
Bronchitis and emphysema	7.5	4.9	28.1	36.7	14.0	8.8	49.6	50.4
Asthma	17.7	8.1	27.1	32.7	8.3	6.2	53.1	46.9
Hay fever	10.3	7.8	33.8	42.7	1.7	3.7	45.8	54.2
Dental problems	6.2	8.3	32.5	42.1	4.9	5.9	43.6	56.4
Gastric and duodenal ulcers	—	—	48.2	34.5	9.6	6.8	58.6	41.4
Digestive disorders	3.7	2.8	25.9	37.2	12.0	18.4	41.7	58.3
Skin disorders	9.8	10.9	24.1	48.4	2.8	4.2	36.6	63.4
Arthritis and rheumatism	0.2	—	22.5	41.8	11.8	23.3	34.6	65.4
Limb and joint disorders	1.7	1.3	40.8	37.8	8.2	10.3	50.6	49.4
Trauma	7.5	4.3	45.6	30.8	3.5	8.2	56.6	43.4
Other	5.0	4.5	22.7	45.6	7.8	14.3	35.5	64.5

<sup>1</sup>“Prevalence” refers to existing conditions reported at the time of the interview and therefore includes both acute and chronic conditions.  
Source: **The Health of Canadians, Report of the Canada Health Survey**, Health and Welfare Canada, Statistics Canada, 1981.

3.8 Rates of selected notifiable diseases, specific years, per 100,000 population

Disease	1951	1961	1971	1976	1979	1980	1981	1982
Tuberculosis	74.3	32.7	18.2	11.4	11.8	11.4	10.0	9.7
Infectious hepatitis	4.6	67.5	40.5	18.3	7.1	5.7	4.6	5.0
Meningococcal infections	2.1	0.7	1.0	1.5	1.3	1.1	0.9	0.8
Venereal diseases	135.4	102.9	170.2	247.4	231.5	235.1	243.2	224.8
Gonococcal infections	102.5	90.2	158.7	229.5	219.0	222.6	231.4	215.5
Syphilis	32.7	13.0	11.5	17.4	12.5	12.5	11.8	9.3
Other	0.2	—	—	0.6	—	—	—	—
Diarrhoea of newborn, epidemic	11.1	1.4	0.4	0.1	..	..	..	..
Salmonella infections	..	8.9	19.3	12.9	31.4	35.8	33.8	34.9
Measles	438.4	..	34.4	40.4	95.0	57.9	9.5	4.3
Streptococcal sore throat and scarlet fever	110.4	71.6	50.0	81.3	..	..	..	..

3.9 Cancer incidence, mortality and hospital separations, 1977-80

Province or territory of residence	Number of cases			Rate per 100,000 population		
	New primary sites <sup>1</sup>	Deaths from cancer	Hospital separations with cancer <sup>2, 3</sup>	New primary sites <sup>1</sup>	Deaths from cancer	Hospital separations with cancer <sup>2, 3</sup>
1977						
Newfoundland	1,430	635	2,871	254.2	112.9	510.4
Prince Edward Island	428	208	924	355.8	172.9	768.1
Nova Scotia	2,427	1,539	7,578	290.5	184.2	907.1
New Brunswick	2,408	1,012	4,939	350.8	147.4	719.6
Quebec	19,154	9,741	31,777	304.9	155.0	505.8
Ontario	..	13,235	62,973	..	158.1	752.1
Manitoba	4,400	1,820	7,468	426.6	176.5	724.1
Saskatchewan	4,062	1,470	7,345	433.7	157.0	784.3
Alberta	5,491	2,288	11,759	289.0	120.4	619.0
British Columbia	9,887	4,058	19,640	395.9	162.5	786.4
Yukon	13	18	..	60.5	83.7	..
Northwest Territories	93	26	..	214.8	60.0	..
Canada	49,793	36,050	157,274	333.8	154.8	677.1

3.9 Cancer incidence, mortality and hospital separations, 1977-80 (concluded)

Province or territory of residence	Number of cases			Rate per 100,000 population		
	New primary sites <sup>1</sup>	Deaths from cancer	Hospital separations with cancer <sup>2, 3</sup>	New primary sites <sup>1</sup>	Deaths from cancer	Hospital separations with cancer <sup>2, 3</sup>
1978						
Newfoundland	1,467	696	2,992	257.8	122.3	525.8
Prince Edward Island	417	198	844	341.8	162.3	691.8
Nova Scotia	2,248	1,543	7,462	267.3	183.5	887.3
New Brunswick	2,509	1,063	5,453	361.1	153.0	784.7
Quebec	20,113	10,086	32,615	320.1	160.5	519.1
Ontario	..	13,584	60,166	..	160.9	712.4
Manitoba	4,544	1,779	7,372	440.0	172.3	713.8
Saskatchewan	3,957	1,531	7,431	417.6	161.6	784.3
Alberta	5,684	2,431	12,303	291.2	124.5	630.2
British Columbia	11,476	4,244	20,756	453.6	167.7	820.4
Yukon	9	11	..	41.5	50.7	..
Northwest Territories	53	24	..	121.6	55.0	..
Canada	52,477	37,190	157,394	349.0	158.4	672.1
1979						
Newfoundland	1,410	734	3,073	245.9	128.0	543.6
Prince Edward Island	509	219	879	413.8	178.0	719.3
Nova Scotia	2,506	1,563	6,824	295.5	184.3	808.9
New Brunswick	2,447	1,197	5,549	349.0	170.7	799.3
Quebec	19,754	10,421	32,904	314.1	165.1	517.5
Ontario	..	14,045	64,203	..	165.7	753.0
Manitoba	4,694	1,838	7,050	454.7	178.0	687.0
Saskatchewan	4,003	1,586	7,495	417.1	165.2	766.3
Alberta	6,156	2,554	12,295	305.7	126.8	589.0
British Columbia	11,477	4,377	22,419	446.4	170.2	857.4
Yukon	40	18	..	184.3	82.9	..
Northwest Territories	55	32	..	126.7	73.2	..
Canada	53,051	38,584	162,691	349.6	162.9	683.1
1980						
Newfoundland	1,455	756	3,107	251.2	130.5	548.1
Prince Edward Island	580	202	781	466.6	162.5	637.6
Nova Scotia	2,642	1,629	6,749	309.8	191.0	797.0
New Brunswick	2,519	1,146	5,694	356.0	162.0	819.3
Quebec	17,928	10,741	33,931	283.9	170.1	529.9
Ontario	..	14,316	66,461	..	167.0	774.0
Manitoba	4,895	1,931	7,290	475.5	187.6	711.4
Saskatchewan	4,578	1,651	7,424	471.6	170.1	754.2
Alberta	5,821	2,612	12,511	279.5	125.4	574.0
British Columbia	12,206	4,526	24,101	462.1	171.3	894.6
Yukon	44	24	..	205.6	112.1	..
Northwest Territories	71	44	..	164.4	101.9	..
Canada	52,739	39,578	168,049	343.2	165.3	697.2

<sup>1</sup>Information not available for Ontario.  
<sup>2</sup>Information not available for Yukon and Northwest Territories.  
<sup>3</sup>Data listed under 1979 are for 1979-80 and under 1980 for 1980-81.

3.10 Cancer incidence, mortality and hospital separations by diagnosis, 1979-80

Cancer site <sup>1</sup>		New primary sites <sup>2</sup>	Rate per 100,000 population <sup>2</sup>	Deaths from cancer	Rate per 100,000 population	Hospital separations with cancer <sup>3, 4</sup>	Rate per 100,000 population <sup>3, 4</sup>
1979							
140-208	Population		15,111.7		23,681.3		
140-149	All cancers	52,956	350.4	38,584	162.9	162,691	683
151	Lip, oral cavity and pharynx	1,657	11.0	794	3.4	3,951	17
153	Stomach	1,878	12.4	2,375	10.0	5,238	22
154	Colon	4,123	27.3	3,671	15.5	10,784	45
157	Rectum	2,264	15.0	1,464	6.2	6,800	29
162	Pancreas	1,180	7.8	2,154	9.1	3,478	15
172	Lung	6,057	40.1	8,590	36.3	21,057	88
173	Malignant melanoma of the skin	719	4.8	307	1.3	1,743	7
174	Other of skin	5,916	63.0	82	0.3	2,667	12
180	Breast <sup>5</sup>	5,958	39.4	3,393	14.3	17,073	142
182	Cervix uteri <sup>5</sup>	969	6.4	473	2.0	4,080	34
183	Body of uterus <sup>5</sup>	1,432	9.5	309	1.3	4,011	33
185	Ovary <sup>5</sup>	950	6.3	1,042	4.4	5,635	47
188	Prostate <sup>6</sup>	3,809	25.2	2,064	8.7	11,522	97
189	Bladder	2,162	14.3	947	4.0	10,289	47
200-203	Kidney	961	6.4	786	3.3	2,869	13
204-208	Brain	701	4.6	990	4.2	3,177	15
	Lymphatic tissues	2,174	14.4	1,842	7.8	11,347	52
	Leukemia	1,071	7.1	1,567	6.6	6,921	32
	All other sites	5,375	35.6	5,734	24.2	30,049	126

3.10 Cancer incidence, mortality and hospital separations by diagnosis, 1979-80 (concluded)

Cancer site <sup>1</sup>		New primary sites <sup>2</sup>	Rate per 100,000 population <sup>2</sup>	Deaths from cancer	Rate per 100,000 population	Hospital separations with cancer <sup>3, 4</sup>	Rate per 100,000 population <sup>3, 4</sup>
1980							
	Population		15,302.4		23,941.1		
140-208	All cancers	52,624	343.9	39,578	165.3	168,049	706
140-149	Lip, oral cavity and pharynx	1,544	10.1	706	2.9	3,989	17
151	Stomach	1,734	11.3	2,188	9.1	5,112	21
153	Colon	4,075	26.6	3,775	15.8	11,261	47
154	Rectum	2,162	14.1	1,407	5.9	7,191	30
157	Pancreas	1,200	7.8	2,120	8.9	3,661	15
162	Lung	6,167	40.3	9,090	38.0	22,062	93
172	Malignant melanoma of the skin	735	4.8	319	1.3	1,965	8
173	Other of skin	9,589	62.7	74	0.3	2,628	11
174	Breast <sup>5</sup>	5,704	37.3	3,472	14.5	17,058	142
180	Cervix uteri <sup>5</sup>	884	5.8	432	1.8	3,891	32
182	Body of uterus <sup>5</sup>	1,386	9.1	305	1.3	4,242	35
183	Ovary <sup>5</sup>	931	6.1	1,012	4.2	5,907	49
185	Prostate <sup>6</sup>	3,834	25.1	2,035	8.5	12,100	102
188	Bladder	1,987	13.0	1,009	4.2	11,053	46
189	Kidney	923	6.0	780	3.3	2,937	12
191	Brain	806	5.3	1,143	4.8	3,370	14
200-203	Lymphatic tissues	2,116	13.8	1,976	8.3	11,557	49
204-208	Leukemia	1,184	7.7	1,583	6.6	6,871	29
	All other sites	5,663	37.0	6,152	25.7	31,194	131

<sup>1</sup>International Classification of Diseases, 9th Revision.  
<sup>2</sup>Excludes Ontario, Yukon and Northwest Territories.  
<sup>3</sup>Excludes Yukon and Northwest Territories.  
<sup>4</sup>Data listed under 1979 are for 1979-80 and under 1980 for 1980-81.  
<sup>5</sup>Females only.  
<sup>6</sup>Males Only.

3.11 Separated cases and operations in general and allied special hospitals, by age group, 1977 to 1980-81<sup>1</sup>

Item		Under 15	15-24	25-44	45-64	65 +	Total
1977							
All separated cases							
Cases	No.	573,786	583,988	951,398	776,780	700,281	3,586,233
Days in hospital	"	3,194,108	3,445,005	6,749,685	9,550,782	17,053,966	39,993,644
Av. days per case	"	5.6	5.9	7.1	12.3	24.4	11.2
Separated cases undergoing surgery							
Cases (primary operations)	No.	221,890	343,269	600,202	398,530	257,505	1,821,396
Days in hospital	"	1,076,403	1,958,079	3,895,041	4,319,992	4,474,128	15,723,643
Av. days per case	"	4.9	5.7	6.5	10.8	17.4	8.6
Rate per 100,000 population							
All separated cases		9,922	12,803	14,958	17,477	33,858	15,446
All operated cases		3,837	7,526	9,436	8,967	12,450	7,845
Days of all separated cases		55,231	75,527	106,119	214,890	824,545	172,254
Days of all operated cases		18,613	42,928	61,238	97,199	216,319	67,722
Population <sup>2</sup>		5,783,200	4,561,300	6,360,500	4,444,500	2,068,300	23,217,800
1978							
All separated cases							
Cases	No.	553,652	579,037	958,086	779,714	692,777	3,563,246
Days in hospital	"	3,131,149	3,385,916	6,634,131	9,168,551	15,118,526	37,438,273
Av. days per case	"	5.7	5.8	6.9	11.8	21.8	10.5
Separated cases undergoing surgery							
Cases (primary operations)	No.	217,625	362,640	641,616	426,638	276,111	1,924,630
Days in hospital	"	1,091,305	2,083,117	4,176,761	4,647,182	4,885,360	16,883,725
Av. days per case	"	5.0	5.7	6.5	10.9	17.7	8.8
Rate per 100,000 population							
All separated cases		9,765	12,508	14,712	17,345	32,467	15,201
All operated cases		3,839	7,833	9,853	9,491	12,940	8,211
Days of all separated cases		55,228	73,138	101,874	203,954	708,526	159,717
Days of all operated cases		19,249	44,997	64,138	103,376	228,951	72,028
Population <sup>2</sup>		5,669.5	4,629.5	6,512.1	4,495.4	2,138.8	23,440.4

3.11 Separated cases and operations in general and allied special hospitals, by age group, 1977 to 1980-81<sup>1</sup> (concluded)

Item		Under 15	15-24	25-44	45-64	65 +	Total
1979-80 <sup>3</sup>							
All separated cases							
Cases	No.	524,588	552,092	920,529	731,518	742,816	3,471,543
Days in hospital	"	2,899,790	3,249,166	6,473,819	8,969,989	18,462,038	40,054,802
Av. days per case	"	5.5	5.9	7.0	12.3	24.9	11.5
Separated cases undergoing surgery							
Cases (primary operations)	No.	185,168	349,745	605,487	346,916	242,410	1,729,726
Days in hospital	"	865,979	1,914,998	3,752,602	3,652,374	4,290,379	14,476,332
Av. days per case	"	5.8	5.5	6.2	10.5	17.7	8.4
Rate per 100,000 population							
All separated cases		9,436	11,872	13,520	16,026	33,267	14,577
All operated cases		3,331	7,521	8,893	7,600	10,856	7,263
Days of all separated cases							
Days of all separated cases		52,161	69,870	95,082	196,508	826,819	168,186
Days of all operated cases		15,577	41,180	55,116	80,013	192,144	60,785
Population <sup>2</sup>		5,559.3	4,650.3	6,808.6	4,564.7	2,232.9	23,815.8
1980-81 <sup>3</sup>							
All separated cases							
Cases	No.	504,504	548,606	935,917	742,428	783,465	3,514,920
Days in hospital	"	2,804,043	3,292,106	6,790,513	9,340,640	20,408,502	42,635,804
Av. days per case	"	5.6	6.0	7.3	12.6	26.0	12.1
Separated cases undergoing surgery							
Cases (primary operations)	No.	212,488	374,205	676,113	454,295	387,498	2,104,599
Days in hospital	"	1,161,971	2,178,536	4,471,294	5,073,744	7,686,043	20,571,588
Av. days per case	"	5.5	5.8	6.6	11.2	19.8	9.8
Rate per 100,000 population							
All separated cases		9,183	11,771	13,322	16,092	33,906	14,582
All operated cases		3,868	8,029	9,624	9,847	16,770	8,731
Days of all separated cases							
Days of all separated cases		51,041	70,637	96,657	202,454	883,217	176,882
Days of all operated cases		21,151	46,744	63,645	109,971	332,628	85,345
Population <sup>2</sup>		5,493.7	4,660.6	7,025.4	4,613.7	2,310.7	24,104.1

<sup>1</sup>Excludes newborn and data for Yukon and Northwest Territories.

<sup>2</sup>Estimates of Aug. 1, 1977.

<sup>3</sup>Fiscal year ending March 31, preliminary figures.

3.12 Number and approved bed complement of operating hospitals, 1980

Province or territory	Type of hospital						
	General	Beds	Allied special	Beds	Mental	Beds	Total
Newfoundland	34	2,904	13	407	1	205	48
Prince Edward Island	8	662	3	109	1	240	12
Nova Scotia	46	5,006	5	551	3	724	54
New Brunswick	32	4,229	2	30	2	980	36
Quebec	122	28,982	126	24,883	—	—	248
Ontario	201	41,156	62	7,854	17	5,759	280
Manitoba	81	6,631	23	528	3	872	107
Saskatchewan	132	6,878	9	1,094	2	388	143
Alberta	118	11,839	36	4,434	3	1,215	157
British Columbia	95	16,228	39	2,862	4	2,690	138
Yukon	3	147	3	12	—	—	6
Northwest Territories	6	250	40	186	—	—	46
Canada	878	124,912	361	42,950	36	13,073	1,275

### 3.13 Patient-days by major causes, public general and allied special hospitals, Canada, 1979-80<sup>1, 2</sup>

Cause <sup>3</sup>	Percentage by age						
	Less than 1 yr	1-14	15-24	25-44	45-64	65 +	All ages
Heart diseases	—	—	—	—	10.0	14.3	9.2
Mental disorders	—	4.4	12.7	13.9	9.8	6.6	8.7
Cerebrovascular diseases	—	—	—	—	5.5	14.6	8.2
Accidents	—	13.9	16.1	9.0	6.8	6.9	8.2
Respiratory diseases	28.8	25.8	4.2	2.9	5.4	6.9	7.1
Diseases of musculo-skeletal system	—	3.9	4.4	6.1	7.1	5.1	5.5
Diseases of nervous system	2.5	6.8	4.0	5.0	6.4	4.6	5.1
All deliveries	—	—	23.3	17.6	—	—	4.7
Symptoms, senility and ill-defined conditions	6.8	5.2	2.4	2.7	3.3	3.9	3.6
Arteriosclerotic diseases	—	—	—	—	2.0	4.9	2.8
Diseases of breast and female genitalia	—	—	3.2	6.7	2.8	—	2.2
Infections of kidney and urinary system	—	3.1	—	1.9	2.2	—	2.0
Other causes	61.9	36.9	29.7	34.2	38.6	32.2	32.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Fiscal year ending Mar. 31, preliminary figures.

<sup>2</sup>Excludes mental hospitals and tuberculosis sanatoria as well as out-patients.

<sup>3</sup>All causes accounting for more than 2% of the total number of patient-days for "all-ages group" are shown in descending order of importance.

### 3.14 General and allied special hospital separations, days per 100,000 population, and average days of stay, by diagnostic category, 1977 to 1980-81<sup>1</sup>

Diagnostic category <sup>2</sup>	Separations	Separations per 100,000 population	Days per 100,000 population	Average days of stay
1977				
Infective and parasitic diseases	99,452	428	3,496	8.2
Neoplasms	228,775	985	15,300	15.5
Endocrine, nutritional and metabolic diseases	72,040	310	4,884	15.7
Diseases of the blood and blood-forming organs	22,912	99	1,071	10.9
Mental disorders	148,689	640	12,292	19.2
Diseases of the nervous system and sense organs	158,621	683	11,237	16.4
Diseases of the circulatory system	393,971	1,697	39,265	23.1
Diseases of the respiratory system	417,341	1,798	12,760	7.1
Diseases of the digestive system	388,449	1,673	14,998	9.0
Diseases of the genito-urinary system	302,160	1,301	9,447	7.3
Complications of pregnancy, childbirth and the puerperium	498,441	2,147	10,846	5.1
Diseases of the skin and subcutaneous tissue	59,014	254	2,267	8.9
Diseases of the musculoskeletal system and connective tissue	170,168	733	9,757	13.3
Congenital anomalies	41,555	179	1,763	9.8
Symptoms and ill-defined conditions	155,232	669	4,798	7.2
Accidents, poisoning and violence (nature of injury)	338,597	1,458	15,183	10.4
Supplementary classifications	90,816	391	2,888	7.4
All causes	3,586,233	15,446	172,254	11.2
1978				
Infective and parasitic diseases	98,199	419	3,210	7.7
Neoplasms	222,369	949	14,041	14.8
Endocrine, nutritional and metabolic diseases	70,642	301	4,489	14.9
Diseases of the blood and blood-forming organs	22,920	98	1,052	10.8
Mental disorders	156,481	668	13,278	19.9
Diseases of the nervous system and sense organs	154,949	661	9,267	14.0
Diseases of the circulatory system	376,660	1,607	32,521	20.2
Diseases of the respiratory system	405,398	1,729	12,015	6.9
Diseases of the digestive system	377,870	1,612	14,045	8.7
Diseases of the genito-urinary system	294,917	1,258	8,924	7.1
Complications of pregnancy, childbirth and the puerperium	494,576	2,110	10,573	5.0
Diseases of the skin and subcutaneous tissue	57,819	247	2,220	9.0
Diseases of the musculoskeletal system and connective tissue	168,261	718	9,085	12.7
Congenital anomalies	40,521	173	1,673	9.7
Symptoms and ill-defined conditions	180,860	772	5,768	7.5
Accidents, poisoning and violence (nature of injury)	336,153	1,434	13,700	9.6
Supplementary classifications	104,651	446	3,854	8.6
All causes	3,563,246	15,201	159,717	10.5

### 3.14 General and allied special hospital separations, days per 100,000 population, and average days of stay, by diagnostic category, 1977 to 1980-81<sup>1</sup> (concluded)

Diagnostic category <sup>2</sup>	Separations	Separations per 100,000 population	Days per 100,000 population	Average days of stay
1979-80 <sup>3</sup>				
Infective and parasitic diseases	66,307	278	2,463	8.8
Neoplasms	213,000	894	14,363	16.1
Endocrine, nutritional and metabolic diseases	66,994	279	4,425	15.8
Diseases of the blood and blood-forming organs	23,396	98	1,078	11.0
Mental disorders	154,929	651	14,651	22.5
Diseases of the nervous system and sense organs	149,485	628	10,660	17.0
Diseases of the circulatory system	374,824	1,574	37,225	23.7
Diseases of the respiratory system	375,252	1,576	11,982	7.6
Diseases of the digestive system	397,366	1,668	14,229	8.5
Diseases of the genito-urinary system	290,016	1,218	8,759	7.2
Complications of pregnancy, childbirth and the puerperium	501,216	2,105	10,315	4.9
Diseases of the skin and subcutaneous tissue	52,541	221	2,084	9.4
Diseases of the musculoskeletal system and connective tissue	171,621	721	9,281	12.9
Congenital anomalies	37,821	159	1,721	10.8
Symptoms and ill-defined conditions	6,676	28	395	14.1
Accidents, poisoning and violence (nature of injury)	320,478	1,346	13,859	10.3
Supplementary classifications	102,833	432	4,658	10.8
All causes	3,471,543	14,577	168,186	11.5
1980-81 <sup>3</sup>				
Infective and parasitic diseases	58,597	243	2,371	9.8
Neoplasms	216,353	898	14,591	16.3
Endocrine, nutritional and metabolic diseases	65,430	271	4,609	17.0
Diseases of the blood and blood-forming organs	23,281	97	1,078	11.2
Mental disorders	158,347	657	17,002	25.9
Diseases of the nervous system and sense organs	154,926	643	12,174	18.9
Diseases of the circulatory system	385,998	1,601	39,864	24.9
Diseases of the respiratory system	367,304	1,524	12,192	8.0
Diseases of the digestive system	405,909	1,684	14,309	8.5
Diseases of the genito-urinary system	294,586	1,222	8,757	7.2
Complications of pregnancy, childbirth and the puerperium	506,291	2,100	10,160	4.8
Diseases of the skin and subcutaneous tissue	51,468	214	2,041	9.6
Diseases of the musculoskeletal system and connective tissue	178,078	739	9,353	12.7
Congenital anomalies	37,204	154	1,593	10.3
Symptoms and ill-defined conditions	168,977	701	5,657	8.1
Accidents, poisoning and violence (nature of injury)	311,225	1,291	13,803	10.7
Supplementary classifications	121,613	505	6,754	13.4
All causes	3,505,587	14,544	176,274	12.1

<sup>1</sup>Excludes newborn and data for Yukon and Northwest Territories.

<sup>2</sup>Major groupings of the International Classification of Diseases, Adapted - 8th Revision. More detailed information is available in Statistics Canada publications *Hospital morbidity* (Catalogue 82-206) and *Hospital morbidity - Canadian diagnostic list* (Catalogue 82-209).

<sup>3</sup>Fiscal year ending Mar. 31, preliminary figures.

### 3.15 Hospital separations by diagnostic category and sex

Diagnostic category		1977 <sup>1</sup>	1978	1979-80 <sup>2</sup>	1980-81 <sup>2</sup>
Infective and parasitic diseases	M	49,575	49,009	33,374	29,294
	F	49,877	49,190	32,933	29,303
Neoplasms	M	94,521	93,628	93,541	96,477
	F	134,254	128,741	119,459	119,876
Endocrine, nutritional and metabolic diseases	M	29,168	28,158	26,650	26,442
	F	42,872	42,484	39,844	38,988
Diseases of the blood and blood-forming organs	M	10,480	10,341	10,634	10,557
	F	12,432	12,579	12,762	12,724
Mental disorders	M	69,361	72,563	70,915	73,497
	F	79,328	83,918	84,014	84,850
Diseases of the nervous system and sense organs	M	76,420	74,717	71,967	74,388
	F	82,201	80,232	77,518	80,538
Diseases of the circulatory system	M	216,257	208,298	206,812	213,771
	F	177,714	168,362	168,012	172,227
Diseases of the respiratory system	M	229,506	222,802	207,023	202,978
	F	187,835	182,596	168,229	164,326
Diseases of the digestive system	M	199,441	194,689	204,541	209,093
	F	189,008	183,181	192,825	196,816
Diseases of the genito-urinary system	M	99,094	96,025	92,938	94,833
	F	203,066	198,892	197,078	199,753
Complications of pregnancy, childbirth and the puerperium	F	498,441	494,576	501,216	506,291
Diseases of the skin and subcutaneous tissue	M	29,319	28,278	25,631	25,139
	F	29,695	29,541	26,910	26,329

### 3.15 Hospital separations by diagnostic category and sex (concluded)

Diagnostic category		1977 <sup>1</sup>	1978	1979-80 <sup>2</sup>	1980-81 <sup>2</sup>
Diseases of the musculoskeletal system and connective tissue	M	83,147	81,721	82,418	86,599
	F	87,021	86,540	89,203	91,479
Congenital anomalies	M	22,416	22,280	20,822	20,614
	F	19,139	18,241	16,999	16,590
Symptoms and ill-defined conditions	M	70,471	81,250	78,104	80,005
	F	84,761	99,610	89,184	88,972
Accidents, poisonings and violence (nature of injury)	M	200,570	199,689	191,213	184,907
	F	138,027	136,464	129,265	126,318
Supplementary classifications	M	16,291	21,925	28,633	37,687
	F	74,525	82,726	74,200	83,926
All causes	M	1,496,037	1,485,373	1,445,216	1,466,281
	F	2,090,196	2,077,873	2,019,651	2,039,306

<sup>1</sup>Excludes newborn and data for Yukon and Northwest Territories.

<sup>2</sup>Fiscal year ending Mar. 31, preliminary figures.

### 3.16 Primary operations in general and allied special hospitals, by age group and by sex, 1977<sup>1</sup> to 1979-80

Operation		Under 15	15-24	25-44	45-64	65 +	Total
1977							
All operations	M	127,756	95,686	145,979	185,695	133,811	688,927
	F	94,134	247,583	454,223	212,835	123,694	1,132,469
	T	221,890	343,269	600,202	398,530	257,505	1,821,396
1978							
All operations	M	124,826	98,717	154,001	202,167	142,530	722,241
	F	92,799	263,923	487,615	224,471	133,581	1,202,389
	T	217,525	362,640	641,616	426,638	276,111	1,924,630
1979-80 <sup>2</sup>							
Nervous system	M	4,144	2,534	7,238	7,620	3,454	24,990
	F	2,846	1,865	5,799	6,820	3,365	20,695
Endocrine system	M	241	191	469	521	187	1,609
	F	222	566	1,772	1,794	633	4,987
Eyes	M	4,516	2,096	3,072	6,930	10,543	27,157
	F	4,012	1,456	2,359	6,984	16,252	31,063
Ears	M	7,010	1,692	3,131	2,158	609	14,600
	F	5,171	1,843	3,397	2,457	585	13,453
Nose, throat and pharynx	M	38,174	16,020	15,743	8,093	3,573	81,603
	F	35,743	20,061	12,439	5,803	3,148	77,194
Respiratory system	M	708	1,310	2,216	5,519	4,615	14,368
	F	422	662	1,558	3,140	2,302	8,084
Cardiovascular system	M	2,630	1,685	7,572	27,878	14,733	54,498
	F	2,170	1,556	8,514	15,941	10,336	38,517
Hematic and lymphatic systems	M	739	796	1,163	2,235	2,337	7,270
	F	538	643	1,284	2,072	2,601	7,138
Digestive system and abdominal region	M	16,903	14,921	33,025	46,970	30,899	142,718
	F	8,319	20,282	42,797	38,618	26,490	136,506
Urinary tract	M	2,605	2,465	7,235	11,976	13,318	37,599
	F	3,104	2,635	7,736	9,631	7,739	30,845
Male genital organs	M	10,605	3,340	6,394	12,157	22,595	55,091
Female genital organs	F	688	34,146	138,716	45,517	10,064	229,131
Obstetrical procedures	F	647	150,668	205,545	316	—	357,176
Musculoskeletal system	M	13,743	31,479	38,079	25,977	12,761	122,039
	F	10,210	14,932	20,556	25,827	25,118	96,643
Breast	M	145	623	374	514	380	2,036
	F	113	3,077	11,457	11,153	4,857	30,657
Skin and subcutaneous tissue	M	4,824	8,927	9,009	6,262	3,961	32,983
	F	3,767	7,156	6,607	5,804	4,708	28,042
Procedures not elsewhere classified	M	128	33	84	127	125	497
	F	81	85	147	102	122	537
All operations							
	M	107,115	88,112	134,804	164,937	124,090	619,058
	F	78,053	261,633	470,683	181,979	118,320	1,110,668
	T	185,168	349,745	605,487	346,916	242,410	1,729,726

<sup>1</sup>Excludes newborn and data for Yukon and Northwest Territories.

<sup>2</sup>Fiscal year ending Mar. 31, preliminary figures.

3.17 Total therapeutic abortions<sup>1</sup> and abortion rate per 100 live births, by province, 1978-82

Province or territory	Number of therapeutic abortions					Rate per 100 live births <sup>2</sup>				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
Newfoundland	537	645	539	470	457	5.1	6.3	5.2	4.6	4.3
Prince Edward Island	60	46	23	27	26	3.0	2.4	1.2	1.4	1.3
Nova Scotia	1,454	1,511	1,662	1,689	1,691	11.6	12.2	13.4	14.0	14.2
New Brunswick	454	447	467	444	243	4.2	4.1	4.4	2.3	2.3
Quebec	7,881	8,609	8,940	9,042	9,671	8.3	8.7	9.2	9.5	10.3
Ontario	29,290	30,671	30,900	30,463	31,290	24.2	25.2	25.1	24.9	25.2
Manitoba	1,869	1,624	1,587	1,610	1,728	11.4	10.0	9.9	10.0	10.1
Saskatchewan	1,490	1,645	1,572	1,627	1,622	9.0	9.7	9.2	9.5	9.6
Alberta	6,562	6,872	7,131	6,757	6,617	18.5	18.6	17.9	15.8	16.0
British Columbia	12,483	12,716	12,673	12,619	12,566	33.5	33.1	31.6	30.4	29.6
Yukon	94	113	125	123	124	21.0	22.6	26.3	22.9	22.1
Northwest Territories	134	141	126	179	218	11.1	11.0	9.7	13.7	19.8
Residence not reported	2	3	6	3	1	--	--	--	--	--
Canada	62,290	65,043	65,751	65,053	66,254	17.4	17.8	17.7	17.5	17.8

<sup>1</sup>In addition 61 abortions were performed on non-residents in 1978, 92 in 1979, 104 in 1980, 74 in 1981 and 65 in 1982.  
<sup>2</sup>Rates are based on estimated live births.

3.18 Movement of patients<sup>1</sup> and patient-days in reporting public, proprietary and federal hospitals, 1978-82<sup>2</sup>

Type of service and item	1978	1979	1980	1981 <sup>D</sup>	1982 <sup>D</sup>
PUBLIC HOSPITALS					
General Beds <sup>3</sup>	120,596	119,562	121,475	124,066 <sup>5</sup>	124,684 <sup>5</sup>
Separations	3,428,705	3,376,643	3,382,349	3,387,466	3,416,783
Patient-days	34,930,832	34,946,846	35,662,717	35,950,027	36,203,645
Av. daily no. of patients	95,701	95,483	97,706	98,493	99,188
Percentage occupancy <sup>4</sup>	78.2	79.0	79.4	79.4	79.6
Allied special Beds <sup>3</sup>	36,694	37,328	37,254	37,459 <sup>5</sup>	37,247 <sup>5</sup>
Separations	182,272	184,001	185,750	178,358	184,770
Patient-days	12,155,179	12,418,326	12,321,153	12,260,936	12,198,688
Av. daily no. of patients	33,302	33,930	33,757	33,592	33,421
Percentage occupancy <sup>4</sup>	89.9	89.5	89.2	89.7	89.7
Mental Beds <sup>3</sup>	12,855	11,671	11,062	3,046	2,472 <sup>5</sup>
Separations	4,162,285	3,817,791	3,604,039	12,119	9,166
Patient-days	11,404	10,431	9,874	1,000,081	806,835
Av. daily no. of patients	11,404	10,431	9,874	2,740	2,211
Percentage occupancy <sup>4</sup>	81.6	80.9	77.6	90.0	89.4
PROPRIETARY HOSPITALS					
General Beds <sup>3</sup>	108	291	291	241 <sup>5</sup>	234 <sup>5</sup>
Separations	5,389	12,791	12,531	10,190	9,615
Patient-days	25,011	76,858	79,437	62,761	61,895
Av. daily no. of patients	68.52	209.99	217.64	171.95	169.58
Percentage occupancy <sup>4</sup>	63.5	72.2	74.8	71.4	72.5
Allied special Beds <sup>3</sup>	2,987	3,102	3,083	1,896 <sup>5</sup>	2,938 <sup>5</sup>
Separations	11,572	11,912	11,345	8,887	11,870
Patient-days	1,079,405	1,113,479	1,102,252	677,941	1,057,252
Av. daily no. of patients	2,957	3,042	3,020	1,857	2,897
Percentage occupancy <sup>4</sup>	98.8	98.5	98.3	98.0	98.6
Mental Beds <sup>3</sup>	337	337	337	337	328 <sup>5</sup>
Separations	0	0	0	2,254	2,033
Patient-days	116,580	116,516	118,890	118,176	115,875
Av. daily no. of patients	106.5	106.1	108.6	324	317
Percentage occupancy <sup>4</sup>	93.4	93.1	95.2	96.1	96.8

### 3.18 Movement of patients<sup>1</sup> and patient-days in reporting public, proprietary and federal hospitals, 1978-82<sup>2</sup> (concluded)

Type of service and item	1978	1979	1980	1981 <sup>P</sup>	1982 <sup>P</sup>
<b>FEDERAL HOSPITALS</b>					
General					
Beds <sup>3</sup>	3,028	3,001	2,458	2,555 <sup>5</sup>	2,571 <sup>5</sup>
Separations	33,452	34,394	25,831	24,675	23,953
Patient-days	818,584	813,032	664,626	647,824	638,611
Av. daily no. of patients	2,243	2,221	1,821	1,775	1,750
Percentage occupancy <sup>4</sup>	66.2	66.7	69.6	69.5	68.1
Allied special					
Beds <sup>3</sup>	316	219	302	267 <sup>5</sup>	64 <sup>5</sup>
Separations	3,250	2,490	2,825	2,223	1,264
Patient-days	6,702	4,131	5,928	4,057	2,489
Av. daily no. of patients	18.36	11.29	16.24	11.12	6.82
Percentage occupancy <sup>4</sup>	5.8	4.7	5.4	4.2	10.7

<sup>1</sup>Patients refer to adults and children. All ratios are based on population estimates as at June 1 of the year concerned.

<sup>2</sup>Fiscal years beginning April 1 and ending Mar. 31.

<sup>3</sup>Set up at Mar. 31.

<sup>4</sup>Based on approved bed complement.

<sup>5</sup>Approved bed complement.

### 3.19 Average length of stay of adults and children in public general and allied special hospitals, by province, 1978-82 (days)

Year <sup>1</sup> and type of hospital	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Canada <sup>2</sup>
<b>1978</b>											
General	8.68	6.95	10.06	9.88	10.59	9.56	10.02	8.65	7.92	11.23	9.75
Specialty (pediatric and others)	9.12	—	6.96	—	14.40	8.69	20.52	—	6.42	5.35	9.86
Rehabilitation (incl. convalescent)	36.04	24.27	52.86	56.09	51.32	35.23	—	—	50.93	57.45	45.19
Extended care (incl. chronic)	344.65	142.17	—	—	347.43	169.30	165.67	300.47	326.01	146.07	270.57
Nursing stations (outpost and other)	3.24	—	—	—	—	—	—	—	—	—	3.24
Total <sup>3</sup>	9.50	7.57	9.80	9.92	19.15	10.84	10.80	10.98	10.82	12.45	12.62
<b>1979</b>											
General	7.95	6.79	10.24	10.43	10.96	9.78	9.85	8.46	7.98	11.08	9.85
Specialty (pediatric and others)	8.57	—	7.00	—	18.13	8.22	19.70	—	6.27	4.90	10.48
Rehabilitation (incl. convalescent)	31.89	29.14	51.40	45.26	54.10	35.83	—	—	51.24	51.71	45.94
Extended care (incl. chronic)	125.65	228.12	—	—	343.57	196.61	189.86	150.14	331.95	181.93	278.28
Nursing stations (outpost and other)	2.62	—	—	—	—	—	—	—	—	—	2.62
Total <sup>3</sup>	8.27	7.29	9.97	10.47	21.15	11.00	10.68	9.53	10.70	12.56	12.77
<b>1980</b>											
General	8.53	6.91	10.35	10.42	11.88	10.01	9.91	8.85	7.98	11.49	10.24
Specialty (pediatric and others)	8.95	—	6.88	—	14.02	8.41	23.70	—	6.14	4.78	9.68
Rehabilitation (incl. convalescent)	27.36	38.72	49.68	37.23	55.67	33.60	—	—	45.26	52.82	44.85
Extended care (incl. chronic)	195.16	336.33	—	—	294.37	211.07	242.02	174.51	355.60	191.89	263.83
Nursing stations (outpost and other)	3.11	—	—	—	—	—	—	—	—	—	3.11
Total <sup>3</sup>	8.81	7.46	10.09	10.47	19.12	11.38	11.15	10.08	10.93	12.68	12.85

### 3.19 Average length of stay of adults and children in public general and allied special hospitals, by province, 1978-82 (days) (concluded)

Year <sup>1</sup> and type of hospital	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Canada <sup>2</sup>
1981 <sup>P</sup>											
General	8.83	7.09	10.17	10.34	12.37	10.05	9.50	9.33	7.65	11.54	10.38
Specialty (pediatric and others)	9.26	—	6.69	—	23.08	8.30	28.52	—	5.40	4.87	12.79
Rehabilitation (incl. convalescent)	25.36	35.37	51.62	36.36	50.87	33.32	—	—	45.27	83.71	44.21
Extended care (incl. chronic)	—	555.28	—	—	292.65	211.57	174.32	126.79	399.83	234.39	268.37
Nursing stations (outpost and other)	2.86	—	—	—	—	—	—	—	—	—	2.86
Total <sup>3</sup>	8.84	7.99	9.91	10.39	20.00	11.36	10.71	10.19	11.41	13.06	13.12
1982 <sup>P</sup>											
General	9.15	7.68	10.22	10.78	12.63	10.08	9.26	8.68	8.00	11.14	10.35
Specialty (pediatric and others)	8.92	—	6.41	—	20.65	8.32	49.89	—	5.33	6.01	11.80
Rehabilitation (incl. convalescent)	20.92	—	42.66	46.61	55.08	35.07	—	—	44.33	60.69	44.76
Extended care (incl. chronic)	—	203.54	—	—	326.81	216.09	157.47	121.2	414.46	265.28	292.23
Nursing stations (outpost and other)	1.83	—	—	—	—	—	1.03	—	—	—	1.67
Total <sup>3</sup>	9.08	7.96	9.88	10.83	21.15	11.43	10.31	9.17	11.43	12.68	13.19

<sup>1</sup>Fiscal year ending Mar. 31.

<sup>2</sup>Includes Yukon and Northwest Territories.

<sup>3</sup>All public general and allied special hospitals.

### 3.20 Psychiatric in-patient movement, by type of institution and sex, 1978

Type of institution	Reporting institutions	Admissions <sup>1</sup>		Separations <sup>2</sup>	
		Male	Female	Male	Female
Public mental hospital	43	118,321	11,789	18,475	11,891
Institution for the mentally retarded	58	1,068	741	1,249	880
Public psychiatric unit	150	26,322	36,812	26,686	37,303
Federal psychiatric unit	6	477	71	524	67
Psychiatric hospital	13	6,473	5,884	6,491	5,881
Aged and senile home	5	127	79	157	122
Hospital for addicts	20	6,891	1,658	6,888	1,626
Treatment centre for emotionally disturbed children	56	1,624	881	1,549	865
Epilepsy hospital	2	114	85	115	86
All institutions	353	61,417	58,000	62,134	58,721

<sup>1</sup>Includes first admissions, readmissions and transfers-in.

<sup>2</sup>Includes discharges, deaths and transfers-out.

3.21 Psychiatric patient-days in mental institutions and general hospitals by major causes and sex, 1978

Cause	Patient-days			Percentage
	Males	Females	Total	
Neuroses	440,487	961,723	1,402,210	7.8
Mental	255,291	508,101	763,392	
General	185,196	453,622	638,818	
Schizophrenia	3,140,719	1,974,024	5,114,743	28.5
Mental	2,902,376	1,753,207	4,655,583	
General	238,343	220,817	459,160	
Psychoses	1,325,715	1,833,131	3,158,846	17.6
Mental	929,586	1,197,214	2,126,800	
General	396,129	635,917	1,032,046	
Alcoholism	544,741	149,405	694,146	3.9
Mental	305,808	80,788	386,596	
General	238,933	68,617	307,550	
Mental retardation	3,042,814	1,902,682	4,945,496	27.6
Mental	2,975,472	1,835,373	4,810,845	
General	67,342	67,309	134,651	
Personality disorders	337,168	219,047	556,215	3.1
Mental	293,099	155,990	449,089	
General	44,069	63,057	107,126	
Other or not stated	1,200,846	854,488	2,055,334	11.5
Mental	1,004,911	617,267	1,622,178	
General	195,935	237,221	433,156	
Total	10,032,490	7,894,500	17,926,990	100.0
Mental	8,666,543	6,147,940	14,814,483	
General	1,365,947	1,746,560	3,112,507	

3.22 Residential special care facilities and approved beds, as at April 1, 1980 and 1982

Year and principal characteristics of residents	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Canada
1980											
FACILITIES											
Aged	66	30	100	147	388	560	120	123	187	293	2,020
Physically handicapped and disabled	4	3	11	11	18	98	7	5	14	17	192
Mentally handicapped and retarded	30	7	56	65	88	471	160	44	84	218	1,227
Emotionally disturbed children	9	3	9	8	57	398	63	15	54	62	702
Alcohol and drugs	—	7	7	13	4	31	15	14	26	30	149
Delinquents	3	1	3	—	7	46	9	10	16	10	109
Unmarried mothers	—	1	4	—	3	14	1	3	2	2	30
Transients	—	—	1	—	1	35	2	—	2	18	59
Other	3	2	8	1	19	151	19	13	10	16	255
Total	115	54	198	245	584	1,804	395	227	395	666	4,743 <sup>1</sup>
BEDS											
Aged	2,894	995	4,926	4,238	22,768	51,257	7,676	7,621	12,939	14,149	129,629
Physically handicapped and disabled	67	207	446	455	1,902	6,954	61	150	957	643	11,890
Mentally handicapped and retarded	694	64	2,488	868	6,419	17,715	2,505	1,444	4,541	5,484	42,262
Emotionally disturbed children	45	15	79	127	4,068	5,355	1,006	215	938	681	12,707
Alcohol and drugs	—	114	173	261	255	814	316	255	536	1,360	4,154
Delinquents	104	5	236	—	639	840	215	209	265	155	2,708
Unmarried mothers	—	7	55	—	96	302	36	53	68	45	662
Transients	—	—	24	—	50	1,380	92	—	98	620	2,264
Other	58	9	65	26	773	1,876	315	144	804	195	4,465
Total	3,862	1,416	8,492	5,975	36,970	86,493	12,222	10,091	21,146	23,332	210,841 <sup>2</sup>

### 3.22 Residential special care facilities and approved beds, as at April 1, 1980 and 1982 (concluded)

Year and principal characteristics of residents	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Canada
<b>1982 FACILITIES</b>											
Aged	71	28	116	153	528	523	130	134	217	317	2,221
Physically handicapped and disabled	5	3	6	5	17	91	3	5	5	26	169
Mentally handicapped and retarded	33	10	61	90	87	660	116	53	163	257	1,532
Emotionally disturbed children	8	2	22	7	70	310	47	12	125	96	713
Alcohol and drugs	2	7	11	11	8	102	15	16	29	41	243
Delinquents	4	1	2	—	6	35	8	9	7	10	84
Transients	—	—	—	7	1	24	—	—	6	15	53
Other <sup>3</sup>	4	4	11	2	14	130	13	17	22	53	274
<b>Total</b>	<b>127</b>	<b>55</b>	<b>229</b>	<b>275</b>	<b>731</b>	<b>1,875</b>	<b>332</b>	<b>246</b>	<b>574</b>	<b>815</b>	<b>5,289<sup>1</sup></b>
<b>BEDS</b>											
Aged	2,908	981	5,496	4,973	29,380	52,142	8,326	8,563	14,831	17,558	145,231
Physically handicapped and disabled	55	177	125	57	1,413	5,539	40	80	39	861	8,418
Mentally handicapped and retarded	699	274	2,249	2,111	5,695	24,117	2,994	1,400	5,427	5,402	50,384
Emotionally disturbed children	36	10	156	295	3,625	4,407	839	170	1,434	830	11,955
Alcohol and drugs	40	127	196	239	268	2,492	357	311	705	1,706	6,476
Delinquents	110	5	230	—	470	608	175	183	122	153	2,076
Transients	—	—	—	408	50	646	—	—	878	524	2,506
Other <sup>3</sup>	32	30	134	26	493	2,103	345	276	552	537	4,583
<b>Total</b>	<b>3,880</b>	<b>1,604</b>	<b>8,586</b>	<b>8,109</b>	<b>41,394</b>	<b>92,054</b>	<b>13,076</b>	<b>10,983</b>	<b>23,988</b>	<b>27,571</b>	<b>231,629<sup>2</sup></b>

<sup>1</sup>Includes 15 facilities in each of Yukon and Northwest Territories.

<sup>2</sup>Includes 246 beds in Yukon and 175 in Northwest Territories.

<sup>3</sup>Facilities for unmarried mothers are included here.

### 3.23 Operating expense per patient-day for reporting public hospitals, by type of hospital, 1978-82, and by province and type of expense, 1982<sup>1</sup> (dollars)

Type of hospital	1978	1979	1980	1981 <sup>P</sup>	1982 <sup>P</sup>
General	151.94	166.27	211.96	244.69	276.67
Allied special					
Pediatric	305.25	334.23	442.12	528.62	613.12
Rehabilitation (convalescent)	110.64	122.62	162.26	198.24	213.59
Extended care (chronic)	55.84	63.21	83.13	94.89	104.65
Other	260.19	266.40	260.72	306.06	362.94
Nursing station					
Outpost and other	371.85	492.72	711.24	945.88	1,959.35
	Gross salaries and wages <sup>2</sup>	Medical and surgical supplies	Drugs	Supplies and other expenses	Total <sup>3</sup>
<b>1982</b>					
<b>NEWFOUNDLAND</b>					
General	209.92	13.33	8.70	74.97	324.88
Allied special					
Pediatric	277.84	16.31	7.87	85.12	410.87
Rehabilitation (convalescent)	460.77	1.47	0.09	113.99	612.23
Extended care (chronic)	—	—	—	—	—
<b>PRINCE EDWARD ISLAND</b>					
General	144.46	8.63	5.31	46.40	216.40
Allied special					
Rehabilitation (convalescent)	—	—	—	—	—
Extended care (chronic)	102.83	2.39	1.04	23.56	134.70
<b>NOVA SCOTIA</b>					
General	192.67	12.34	8.64	56.46	285.18
Allied special					
Pediatric	310.19	18.91	11.81	125.01	486.33
Rehabilitation (convalescent)	206.65	2.88	2.33	75.80	303.02
Other	290.78	19.59	7.41	86.48	423.76

### 3.23 Operating expense per patient-day for reporting public hospitals, by type of hospital, 1978-82, and by province and type of expense, 1982<sup>1</sup> (dollars) (concluded)

	Gross salaries and wages <sup>2</sup>	Medical and surgical supplies	Drugs	Supplies and other expenses	Total <sup>3</sup>
1982 (concluded)					
NEW BRUNSWICK					
General	173.69	10.29	5.99	51.90	255.77
Allied special					
Rehabilitation (convalescent)	160.03	2.08	1.54	41.22	216.95
QUEBEC					
General	198.11	—	—	76.19	292.01
Allied special					
Pediatric	356.30	—	—	88.89	474.37
Rehabilitation (convalescent)	123.44	—	—	37.00	170.21
Extended care (chronic)	74.46	—	—	21.20	101.83
Other	151.34	—	—	65.80	228.74
ONTARIO					
General	184.85	11.31	7.86	49.07	271.99
Allied special					
Pediatric	499.33	22.92	22.17	132.02	722.27
Rehabilitation (convalescent)	134.53	1.99	1.26	53.27	203.95
Extended care (chronic)	87.27	1.48	1.28	24.07	123.48
Other	330.46	12.02	28.25	114.65	517.42
MANITOBA					
General	201.33	10.89	7.90	63.89	298.15
Allied special					
Extended care (chronic)	103.01	1.02	2.93	18.76	136.66
Other	341.51	0.81	0.51	139.80	501.96
Nursing station					
Outpost and other	—	—	—	—	—
SASKATCHEWAN					
General	157.59	9.18	6.33	40.77	226.70
Allied special					
Extended care (chronic)	111.36	6.98	0.94	24.62	152.41
ALBERTA					
General	224.57	12.59	7.27	56.95	317.86
Allied special					
Pediatric	839.86	42.27	15.92	167.38	1,125.59
Rehabilitation (convalescent)	226.47	3.88	0.93	80.27	329.73
Extended care (chronic)	64.55	0.66	0.97	21.08	92.32
Other	574.18	13.37	52.97	186.82	867.66
BRITISH COLUMBIA					
General	169.64	10.36	6.22	35.64	243.28
Allied special					
Pediatric	613.49	47.75	24.42	129.36	879.82
Rehabilitation (convalescent)	165.15	1.57	1.15	28.55	217.14
Extended care (chronic)	64.93	0.88	0.67	12.61	87.46
Other	656.29	17.56	56.98	193.90	999.52
YUKON					
General	—	—	—	—	—
NORTHWEST TERRITORIES					
General	196.14	4.45	5.27	67.99	301.69

<sup>1</sup>Fiscal year ending Mar. 31.

<sup>2</sup>Includes medical staff remuneration.

<sup>3</sup>Includes employee benefits.

## 3.24 Expenditure of reporting public general hospitals, by province, 1978-82

Year <sup>1</sup> and province or territory	Reporting hospitals	Expenditure				Total \$'000,000
		Gross salaries and wages <sup>2</sup> %	Medical and surgical supplies %	Drugs %	Supplies and other expenses <sup>3</sup> %	
1978						
Newfoundland	34	64.02	3.48	2.42	30.08	139.25
Prince Edward Island	8	67.28	4.09	3.10	25.53	21.34
Nova Scotia	45	66.50	4.07	2.99	26.44	210.34
New Brunswick	34	66.31	3.76	2.40	27.53	179.51
Quebec	121	70.75	3.13	2.17	23.96	1,638.69
Ontario	198	68.96	3.44	2.42	25.19	2,098.20
Manitoba	78	69.02	3.42	2.48	25.09	253.97
Saskatchewan	132	68.39	3.59	2.64	25.39	229.11
Alberta	115	69.67	3.58	2.57	24.17	460.41
British Columbia	92	73.06	3.77	2.44	20.75	623.83
Yukon	—	—	—	—	—	—
Northwest Territories	2	67.03	1.91	2.14	28.93	2.83
Canada	859	69.64	3.44	2.40	24.53	5,857.65
1979						
Newfoundland	33	64.05	3.89	2.44	29.62	156.61
Prince Edward Island	8	66.31	4.41	3.09	26.20	24.08
Nova Scotia	45	66.43	4.30	3.03	26.24	236.06
New Brunswick	32	65.57	3.54	2.48	28.42	193.21
Quebec	121	70.87	—	—	29.13	1,791.66
Ontario	196	68.45	3.72	2.65	25.18	2,244.41
Manitoba	78	68.51	3.62	2.66	25.21	279.48
Saskatchewan	131	68.54	4.03	2.79	24.64	251.45
Alberta	115	68.83	3.91	2.59	24.68	534.34
British Columbia	93	71.68	4.00	2.48	21.85	707.35
Yukon	—	—	—	—	—	—
Northwest Territories	3	67.66	2.55	1.87	27.93	8.52
Canada	855	69.24	2.76	1.90	26.11	6,427.16
1980						
Newfoundland	33	62.90	4.18	2.30	30.62	183.00
Prince Edward Island	8	65.05	4.39	3.43	27.14	27.37
Nova Scotia	45	66.15	4.35	3.03	26.47	269.90
New Brunswick	32	67.70	4.54	2.50	25.26	233.81
Quebec	118	69.23	—	—	30.77	2,104.06
Ontario	196	67.85	3.97	2.73	25.45	2,522.27
Manitoba	78	67.46	3.63	2.59	26.32	329.04
Saskatchewan	131	69.62	3.96	2.64	23.78	302.53
Alberta	116	68.18	3.82	2.44	25.56	674.67
British Columbia	93	71.53	3.89	2.31	22.27	912.21
Yukon	—	—	—	—	—	—
Northwest Territories	3	62.44	2.54	1.94	33.08	10.22
Canada	853	68.56	2.86	1.88	26.70	7,559.08
1981 <sup>P</sup>						
Newfoundland	34	63.80	4.15	2.41	29.64	201.83
Prince Edward Island	7	64.14	4.34	3.24	28.27	30.60
Nova Scotia	45	66.13	4.21	2.84	26.83	328.87
New Brunswick	33	66.85	4.23	2.51	26.37	268.17
Quebec	121	69.29	—	—	30.71	2,344.52
Ontario	197	67.55	4.19	2.80	25.46	2,967.52
Manitoba	77	68.13	3.88	2.57	25.43	392.57
Saskatchewan	131	69.05	4.21	2.71	24.02	352.17
Alberta	116	70.07	4.03	2.32	23.58	803.80
British Columbia	93	71.27	4.17	2.42	22.13	1,066.14
Yukon	—	—	—	—	—	—
Northwest Territories	3	62.06	2.72	1.93	33.29	13.20
Canada	857	68.61	3.04	1.93	26.43	8,769.39

**3.24 Expenditure of reporting public general hospitals, by province, 1978-82 (concluded)**

Year <sup>1</sup> and province or territory	Reporting hospitals	Expenditure				Total \$'000,000
		Gross salaries and wages <sup>2</sup> %	Medical and surgical supplies %	Drugs %	Supplies and other expenses <sup>3</sup> %	
1982 <sup>P</sup>						
Newfoundland	31	64.61	4.10	2.68	28.61	229.30
Prince Edward Island	7	66.76	3.99	2.45	26.80	41.20
Nova Scotia	44	67.56	4.33	3.03	25.08	368.53
New Brunswick	33	67.91	4.02	2.34	25.73	326.80
Quebec	120	67.84	—	—	32.15	2,525.98
Ontario	194	67.96	4.16	2.89	24.99	3,442.78
Manitoba	77	67.53	3.65	2.65	26.17	472.98
Saskatchewan	132	69.52	4.05	2.79	23.64	414.43
Alberta	117	70.65	3.96	2.29	23.10	1,018.89
British Columbia	94	69.73	4.26	2.56	23.46	1,132.31
Yukon	—	—	—	—	—	—
Northwest Territories	2	65.01	1.48	1.75	31.76	5.18
Canada	851	68.35	3.07	2.02	26.56	9,978.37

<sup>1</sup>Fiscal year ending Mar. 31.<sup>2</sup>Includes medical staff remuneration.<sup>3</sup>Includes employee benefits.**3.25 Physicians and population per physician, by province, 1971 and 1976-81<sup>1</sup>**

Province or territory	Number of physicians <sup>2</sup>						
	1971	1976	1977	1978	1979	1980	1981
Newfoundland	479	779	803	809	822	866	892
Prince Edward Island	98	140	141	147	153	152	155
Nova Scotia	1,081	1,404	1,478	1,539	1,572	1,588	1,599
New Brunswick	609	773	781	786	767	786	815
Quebec	9,455	11,262	11,545	11,606	11,981	12,160	12,638
Ontario	12,506	15,251	15,692	16,033	16,309	16,664	17,028
Manitoba	1,533	1,769	1,811	1,841	1,839	1,878	1,910
Saskatchewan	1,128	1,315	1,390	1,404	1,433	1,442	1,477
Alberta	2,384	2,911	3,014	3,167	3,241	3,406	3,567
British Columbia	3,624	4,470	4,684	4,837	5,011	5,265	5,391
Yukon	17	22	25	28	27	28	28
Northwest Territories	28	33	34	41	37	40	42
Province unspecified	—	1	—	—	—	—	—
Canada	32,942	40,130	41,398	42,238	43,192	44,275	45,542
Population per physician <sup>2</sup>							
Newfoundland	1,101	719	700	697	687	655	640
Prince Edward Island	1,145	853	858	827	801	806	794
Nova Scotia	733	593	566	546	537	534	532
New Brunswick	1,048	883	881	880	906	886	857
Quebec	639	557	545	545	531	528	511
Ontario	621	545	536	529	524	516	509
Manitoba	645	579	569	559	557	545	539
Saskatchewan	813	707	677	675	668	669	662
Alberta	690	647	649	641	651	648	641
British Columbia	614	556	540	532	526	516	514
Yukon	1,129	986	876	804	841	811	850
Northwest Territories	1,304	1,306	1,300	1,088	1,214	1,130	1,107
Canada	659	577	566	560	554	547	538

<sup>1</sup>December 31 of each year.<sup>2</sup>Includes interns and residents.

3.26 Active licensed dentists and population per dentist, 1971 and 1976-81<sup>1</sup>

Province or territory	Number of dentists						
	1971	1976	1977	1978	1979	1980	1981
Newfoundland	60	103	106	116	111	110	123
Prince Edward Island	27	42	47	44	42	40	40
Nova Scotia	230	247	283	304	311	309	314
New Brunswick	130	161	172	176	180	183	196
Quebec	1,690	2,013	2,187	2,274	2,362	2,469	2,580
Ontario	3,187	3,928	4,170	4,276	4,410	4,510	4,637
Manitoba	330	375	410	422	429	439	443
Saskatchewan	221	276	292	302	310	322	335
Alberta	586	793	880	923	980	1,027	1,057
British Columbia	983	1,443	1,489	1,595	1,603	1,658	1,730
Yukon	3	8	9	9	12	12	13
Northwest Territories	6	12	13	10	13	16	16
Canada	7,453	9,401	10,058	10,451	10,763	11,095	11,484
Population per dentist							
Newfoundland	8,787	5,436	5,302	4,858	5,086	5,155	4,638
Prince Edward Island	4,156	2,843	2,574	2,764	2,919	3,063	3,075
Nova Scotia	3,447	3,370	2,954	2,766	2,715	2,742	2,707
New Brunswick	4,909	4,240	4,002	3,929	3,862	3,805	3,564
Quebec	3,574	3,115	2,879	2,781	2,695	2,598	2,502
Ontario	2,438	2,118	2,018	1,983	1,938	1,907	1,869
Manitoba	2,997	2,733	2,513	2,438	2,386	2,330	2,325
Saskatchewan	4,150	3,370	3,224	3,139	3,089	2,997	2,918
Alberta	2,807	2,376	2,222	2,198	2,152	2,148	2,164
British Columbia	2,262	1,723	1,697	1,613	1,645	1,640	1,602
Yukon	6,400	2,713	2,433	2,500	1,892	1,892	1,831
Northwest Territories	6,083	3,592	3,400	4,460	3,454	2,825	2,906
Canada	2,913	2,465	2,330	2,265	2,223	2,184	2,133

<sup>1</sup>1971 data are as of June, 1976-81 data are as of December 31 of each year.

3.27 Registered optometrists and population per optometrist, 1971 and 1976-81

Province or territory	Number of registered optometrists						
	1971	1976	1977	1978	1979	1980	1981
Newfoundland	15	14	16	16	27	27	28
Prince Edward Island	6	6	5	5		6	6
Nova Scotia	33	37	37	38	45	45	50
New Brunswick	41	47	55	55	57	57	61
Quebec	541	658	688	717	743	743	801
Ontario	498	608	639	673	687	687	701
Manitoba	57	66	70	62	73	73	70
Saskatchewan	73	83	89	92	89	89	89
Alberta	150	179	185	180	185	185	198
British Columbia	156	173	182	175	185	185	212
Yukon <sup>1</sup>	..	2	2	2	2	2	3
Northwest Territories <sup>1</sup>	5	6 <sup>2</sup>	6 <sup>2</sup>	7 <sup>2</sup>	8 <sup>2</sup>	5 <sup>2</sup>	5 <sup>2</sup>
Canada	1,575	1,879	1,974	2,022	2,107	2,104 <sup>3</sup>	2,224
Population per registered optometrist							
Newfoundland	35,147	39,993	35,125	35,219	20,907	21,000	20,375
Prince Edward Island	18,700	19,900	24,200	24,320	20,433	20,417	20,500
Nova Scotia	24,027	22,500	22,595	22,129	18,762	18,827	17,000
New Brunswick	15,566	14,523	12,515	12,573	12,195	12,218	11,452
Quebec	11,164	9,531	9,150	8,821	8,568	8,634	8,060
Ontario	15,601	13,682	13,165	12,600	12,438	12,519	12,360
Manitoba	17,351	15,530	14,717	16,594	14,023	14,014	14,713
Saskatchewan	12,563	11,205	10,576	10,305	10,758	10,844	10,982
Alberta	10,965	10,527	10,571	11,269	11,400	11,926	11,553
British Columbia	14,254	14,371	13,886	14,699	14,251	14,694	13,072
Yukon <sup>1</sup>	..	10,850	10,950	11,250	11,350	11,350	7,933
Northwest Territories <sup>1</sup>	11,140	7,183	7,367	6,371	5,613	9,040	5,300
Canada	13,784	12,334	11,873	11,705	11,358	11,516	11,016

<sup>1</sup>Separate information of Yukon and Northwest Territories was not available until 1975.

<sup>2</sup>Optometrists registered and licensed but not resident.

<sup>3</sup>Only available data for 1980, for provinces, are as of June 30, 1980, and are similar to data for 1979.

### 3.28 Licences issued to professional nurses, selected years

Province or territory <sup>1</sup>	1971	1976	1977	1978	1979	1980	1981
Newfoundland	2,649	3,925	4,109	4,314	4,485	4,687	4,817
Prince Edward Island	813	1,023	1,079	1,060	1,077	1,074	1,127
Nova Scotia	5,141	6,583	6,838	6,630	7,476	7,755	8,172
New Brunswick	5,540	6,725	6,804	6,883	7,001	7,028	7,181
Quebec	39,252	49,562	51,261	53,111	52,474	54,941	56,178
Ontario	70,515	88,966	91,971	94,298	95,508	96,165	98,037
Manitoba	6,084	8,140	8,556	8,798	8,916	9,000	8,654
Saskatchewan	6,178	7,123	7,305	7,495	8,073	8,310	8,523
Alberta	12,660	14,481	15,475	16,611	17,707	18,892	20,104
British Columbia	13,750	19,228	20,399	21,523	22,788	24,675	26,239
Yukon <sup>2</sup>	—	—	—	—	—	—	—
Northwest Territories <sup>2</sup>	—	330	235	273	274	293	306
Canada	162,582	206,086	214,032	220,996	225,779	232,820	239,338

<sup>1</sup>Some nurses are registered (licensed) in more than one province. Also includes those nurses who are registered in one or more provinces but are actually working/living abroad.

<sup>2</sup>No licences were issued by Yukon or Northwest Territories up to and including 1975. Although Yukon remained the same in 1976, Northwest Territories issued 330 licences.

### 3.29 Licensed pharmacists and population per pharmacist

Province or territory	Number of licensed pharmacists						
	1971	1976	1977	1978	1979	1980	1981
Newfoundland	169	224	255	276	287	308	334
Prince Edward Island	33	46	50	60	58	54	52
Nova Scotia	310	492	502	520	533	554	550
New Brunswick	164	293	293	310	317	343	353
Quebec	2,037	2,662	2,891	3,068	3,197	3,357	3,534
Ontario	4,531	5,103	5,247	5,388	5,555	5,724	5,813
Manitoba	682	830	833	831	834	860	889
Saskatchewan	690	1,255	1,326	1,247	1,297	1,293	1,313
Alberta <sup>1</sup>	1,203	1,730	1,845	1,928	2,000	2,080	2,141
British Columbia <sup>2</sup>	1,511	2,023 <sup>e</sup>	2,059	2,048	1,944	1,986	2,029
Yukon	..	8	7	9	7	9	10
Northwest Territories	..	21	20	24	23	20	21
Canada	11,330	14,687 <sup>e</sup>	5,328	15,709	16,052	16,588	17,039
Province or territory	Population per licensed pharmacist						
	1971	1976	1977	1978	1979	1980	1981
Newfoundland	3,120	2,500	2,204	2,042	1,967	1,841	1,708
Prince Edward Island	3,400	2,596	2,420	2,027	2,114	2,269	2,365
Nova Scotia	2,558	1,692	1,665	1,617	1,584	1,529	1,545
New Brunswick	3,891	2,330	2,349	2,231	2,193	2,030	1,979
Quebec	2,965	2,356	2,178	2,061	1,991	1,911	1,827
Ontario	1,715	1,630	1,603	1,574	1,538	1,503	1,491
Manitoba	1,450	1,235	1,237	1,238	1,227	1,190	1,158
Saskatchewan	1,329	741	710	760	738	746	744
Alberta <sup>1</sup>	1,398	1,089	1,060	1,052	1,055	1,061	1,068
British Columbia <sup>2</sup>	1,484	1,229	1,227	1,256	1,356	1,369	1,366
Yukon	..	2,713	3,129	2,500	3,243	2,522	2,380
Northwest Territories	..	2,052	2,210	1,858	1,952	2,260	2,214
Canada	1,916	1,578	1,529	1,507	1,491	1,461	1,438

<sup>1</sup>Alberta data included data for Northwest Territories until 1975.

<sup>2</sup>British Columbia data included data for Yukon until 1975.

### 3.30 Full-time personnel employed in reporting public, proprietary and federal hospitals, by province, 1978-80

Year and province or territory	General <sup>1</sup>		General and allied special <sup>1</sup>		Mental	
	Number	Per 100 rated beds	Number	Per 100 rated beds	Number	Per 100 rated beds
1978						
Newfoundland	2,277	81.41	2,529	77.79	591	145.93
Prince Edward Island	437	66.41	494	65.60	321	131.02
Nova Scotia	3,444	67.23	3,693	65.67	1,207	168.81
New Brunswick	3,253	76.13	3,268	76.12	1,039	104.95
Quebec	22,704	75.11	32,221	60.29	1,279	197.38
Ontario	27,015	63.68	30,583	61.16	9,124	151.41
Manitoba	3,980	61.88	4,185	60.47	1,076	123.39
Saskatchewan	3,468	50.65	3,902	49.30	549	141.49
Alberta	6,530	55.75	7,577	49.04	1,701	142.11
British Columbia	7,760	51.18	8,743	48.16	2,562	90.21
Yukon	75	51.02	78	49.06	—	—
Northwest Territories	43	41.35	47	16.10	—	—
Canada	80,986	64.32	97,320	58.53	19,449	135.76
1979						
Newfoundland	2,268	80.40	2,540	77.82	629	155.31
Prince Edward Island	433	67.03	491	66.26	285	116.33
Nova Scotia	3,508	69.73	3,756	67.90	1,195	161.49
New Brunswick	3,086	71.99	3,099	71.95	1,004	101.41
Quebec	23,221	78.01	33,023	62.00	—	—
Ontario	26,367	63.73	30,174	61.17	8,545	154.33
Manitoba	3,941	61.72	4,137	60.18	1,089	124.89
Saskatchewan	3,489	50.94	3,921	49.53	531	136.86
Alberta	6,689	56.84	7,862	49.73	1,799	148.07
British Columbia	7,800	51.44	8,817	48.61	2,333	82.15
Yukon	74	50.34	74	46.54	—	—
Northwest Territories	136	69.74	136	40.84	—	—
Canada	81,012	65.10	98,030	59.17	17,410	131.57
1980						
Newfoundland	2,296	80.17	2,254	78.08	361	176.10
Prince Edward Island	442	66.77	494	65.26	241	100.42
Nova Scotia	3,535	70.62	3,808	69.15	1,071	147.93
New Brunswick	3,098	73.26	3,113	73.26	1,013	103.37
Quebec	23,220	77.22	33,193	61.80	—	—
Ontario	26,523	64.45	30,300	61.95	8,642	150.06
Manitoba	4,126	62.22	4,322	60.78	1,106	126.83
Saskatchewan	3,574	51.96	3,978	49.99	464	119.59
Alberta	6,996	59.09	8,402	51.77	1,860	153.09
British Columbia	8,302	51.24	9,285	49.28	2,115	78.62
Yukon	70	47.62	70	44.03	—	—
Northwest Territories	185	74.00	185	42.82	—	—
Canada	82,367	65.40	99,704	59.65	16,873	129.07

<sup>1</sup>Includes all medical interns and residents, other instructors, school staff and students of formally organized educational programs. Excludes all other medical staff.

### 3.31 Total health expenditures, public and private, selected years

Year	Expenditures \$'000,000	Annual percentage increase	Percentage of GNP	Per capita \$
1960	2,137	—	5.6	119
1965	3,415	9.8	6.2	174
1970	6,256	12.9	7.3	293
1975	12,381	14.6	7.5	545
1976	14,159	14.4	7.4	615
1977	15,533	9.7	7.4	667
1978	17,094	10.0	7.4	726
1979	19,067	11.5	7.2	802
1980	22,179	16.3	7.5	921
1981 <sup>P</sup>	25,769	16.2	7.6	1,058
1982 <sup>P</sup>	30,087	16.8	8.4	1,220

### 3.32 Percentage distribution of health expenditures, public and private, by category, selected years

Category	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981 <sup>P</sup>	1982 <sup>P</sup>
Hospitals	37.7	42.7	45.0	46.9	46.4	44.6	43.8	43.2	42.8	41.6	41.4
Homes for special care	5.8	6.1	7.2	9.2	10.2	11.2	11.7	12.0	12.2	13.7	13.7
Physicians	16.6	16.0	16.6	15.5	14.9	14.9	14.9	14.9	14.8	14.5	14.7
Dentists	5.1	4.7	4.2	4.8	4.9	5.3	5.6	5.8	5.8	5.8	5.6
Other professional services	2.3	1.9	1.7	1.4	1.4	1.4	1.4	1.5	1.5	1.5	1.5
Drugs and appliances	14.5	13.3	12.5	10.5	10.5	10.8	10.8	10.8	10.2	10.4	10.9
All other health costs	18.0	15.3	12.8	11.7	11.7	11.8	11.8	11.8	12.7	12.5	12.2
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

### 3.33 Governmental health expenditures, federal, provincial and local, selected years

Year	Expenditures \$'000,000	Annual percentage increase	Percentage of GNP	Per capita \$	Percentage of total national health expenditures
1960	904	—	2.4	50	42.3
1965	1,779	14.5	3.2	90	52.1
1970	4,392	19.8	5.1	206	70.2
1975	9,478	16.6	5.7	417	76.5
1976	10,873	14.7	5.7	472	76.8
1977	11,871	9.2	5.6	510	76.4
1978	12,935	9.0	5.6	550	75.7
1979	14,323	10.7	5.4	603	75.1
1980	16,506	15.2	5.6	686	74.4
1981 <sup>P</sup>	19,126	15.9	5.6	785	74.2

### 3.34 Total national health expenditures, public and private, by province, selected years (million dollars)

Province or territory	1960	1965	1970	1975	1976	1977	1978	1979	1980	1981 <sup>P</sup>	1982 <sup>P</sup>
Newfoundland	31	52	97	227	271	316	354	396	444	516	610
Prince Edward Island	10	14	26	50	57	63	72	87	110	118	134
Nova Scotia	72	116	195	408	476	518	571	645	734	875	1,081
New Brunswick	62	87	144	288	323	373	411	465	539	660	792
Quebec	530	952	1,708	3,425	3,891	4,131	4,507	4,999	5,858	6,647	7,564
Ontario	819	1,291	2,438	4,623	5,259	5,795	6,353	6,985	7,804	8,983	10,484
Manitoba	113	167	295	539	629	698	747	823	944	1,126	1,288
Saskatchewan	116	157	238	455	532	598	636	702	811	984	1,145
Alberta	163	265	486	975	1,126	1,260	1,446	1,696	2,188	2,600	3,227
British Columbia	218	308	618	1,361	1,554	1,735	1,950	2,216	2,685	3,185	3,661
Yukon and Northwest Territories	3	5	11	30	40	46	53	54	62	76	101
Total	2,137	3,415	6,256	12,381	14,158	15,533	17,100	19,068	22,179	25,770	30,087

### 3.35 Total national health expenditures, public and private, by province, 1981<sup>p</sup> and 1982<sup>p</sup> (million dollars)

Category	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT and NWT	Total
1981 <sup>p</sup>												
Hospitals	228	36	398	263	3,296	3,479	454	385	960	1,187	40	10,724
Homes for special care	67	21	114	120	904	1,356	200	148	296	301	3	3,531
Physicians	53	14	112	68	838	1,490	141	124	353	542	8	3,741
Dentists	12	5	36	23	284	603	61	55	140	262	2	1,483
Other professional services	2	1	6	7	94	148	15	14	51	50	—	389
Drugs and appliances	93	15	133	91	554	956	110	144	226	358	4	2,684
All other health costs	61	27	76	89	679	951	144	113	574	486	19	3,217
Total expenditures	516	118	875	660	6,648	8,983	1,126	984	2,600	3,185	76	25,769
Per capita (\$)	909	959	1,032	948	1,032	1,041	1,096	1,015	1,157	1,158	1,091	1,058
1982 <sup>p</sup>												
Hospitals	274	42	478	319	3,694	4,106	531	445	1,177	1,351	51	12,470
Homes for special care	81	24	137	146	1,014	1,601	234	171	363	342	4	4,118
Physicians	61	16	129	82	934	1,750	163	155	445	670	10	4,414
Dentists	14	6	42	26	318	687	69	64	161	296	2	1,683
Other professional services	3	1	8	8	111	168	19	17	68	66	—	467
Drugs and appliances	107	20	167	115	787	1,115	121	170	273	395	5	3,275
All other health costs	70	24	120	97	706	1,057	151	124	739	542	30	3,661
Total expenditures	610	134	1,081	792	7,564	10,484	1,288	1,145	3,227	3,661	102	30,088
Per capita (\$)	1,070	1,089	1,267	1,132	1,166	1,202	1,243	1,168	1,390	1,311	1,428	1,220

#### Sources

3.1 – 3.24, 3.30 Health Division, Statistics Canada.

3.25 – 3.29 Canada Health Manpower Inventory, Department of National Health and Welfare.

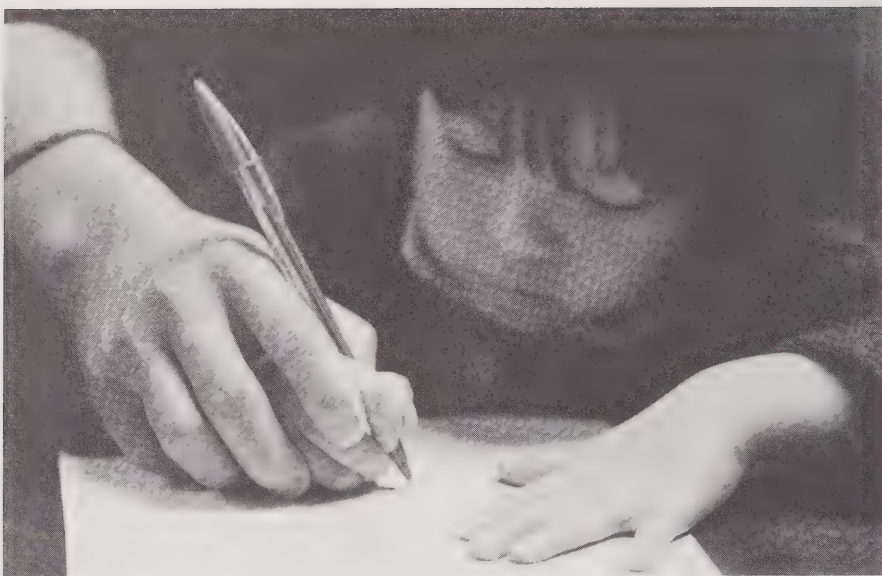
3.31 – 3.35 Health Information Division, Information Systems Directorate, Department of National Health and Welfare.



## CHAPTER 4

---

# EDUCATION



## UPDATE

---

Education is one of Canada's largest investments: in 1983-84 about 5.7 million full-time students in 15,800 schools, colleges and universities were taught by 330,000 full-time teachers at a cost of more than \$30 billion — 8% of the gross national product (GNP) or \$1,200 per capita.

Elementary-secondary enrolment had been declining since 1971-72 but showed signs of levelling off in 1983-84. In fact, small increases are expected for the next few years.

Postsecondary enrolment is still growing, but at a modest pace. Increasing participation of women has been noteworthy: in 1960-61 only 38% of full-time postsecondary students were women but by 1982-83 the proportion had risen to nearly 50%. Indeed it exceeded 50% in community colleges and university undergraduate programs.

Non-government sources such as tuition fees and private donations accounted for just 8% of all monies spent on education. Provincial and municipal governments spend close to a quarter of their budgets on education.

## CHAPTER 4

---

# EDUCATION

<b>4.1</b>	<b>Education in Canada</b>	<b>125</b>
4.1.1	Summary statistics	125
4.1.2	History of education	125
4.1.3	Provincial administration	126
<b>4.2</b>	<b>Elementary and secondary schools</b>	<b>126</b>
4.2.1	Other types of schools	128
4.2.2	Federal schools	128
4.2.3	Financing	128
<b>4.3</b>	<b>Postsecondary education</b>	<b>129</b>
4.3.1	Universities and degree-granting colleges	129
4.3.2	Community colleges	132
4.3.3	Technical and trades training	133
4.3.4	Continuing education	134
<b>4.4</b>	<b>Federal involvement</b>	<b>134</b>
4.4.1	Department of National Defence	134
4.4.2	Other federal programs	135
4.4.3	Indirect participation	135

## TABLES

4.1	Pupils in elementary and secondary schools	137
4.2	Full-time enrolment in community colleges	138
4.3	University enrolment by province	139
4.4-4.6	Degrees, diplomas and certificates awarded	140
4.7	Sources of funds for education	144
4.8-4.12	Expenditures on education	144

## CHARTS

Chart 4.1	Enrolment in schools, colleges, universities	127
Chart 4.2	Education as a percentage of GNP	129
Chart 4.3	University degrees awarded, selected years	131

## CHAPTER 4

# EDUCATION

### 4.1 Education in Canada

#### 4.1.1 Summary statistics

Reflecting a tendency for more students to stay in school longer, enrolment in postsecondary education grew modestly in the late 1970s and early 1980s while lower levels showed a decline of 12.5% from 1970-71 to 1980-81. Enrolment in both universities and community colleges continued to increase, rising 35% from 1970-71 to 1980-81. Enrolment in private schools advanced 47% from 1970 to 1981 while in public schools it continued to decline (Table 4.1).

Nearly 4.86 million children were enrolled in elementary and secondary schools in 1980-81, about 1.8% fewer than in 1979-80. Falling birth rates since 1960 have been the primary cause of the enrolment slump.

There were 273,700 full-time elementary-secondary teachers in 1980-81, down less than 1.0% from 1979-80. Because the number of teachers has not decreased as quickly as enrolment, every year there has been a smaller number of students in relation to teachers.

The number of full-time postsecondary teachers rose in both universities and community colleges, but more rapidly in the latter to keep pace with enrolment growth.

**Spending for education** from kindergarten through graduate studies was \$22.9 billion for 1980-81, an increase of 13% over the previous year. Elementary-secondary education absorbed \$15.3 billion of the 1980-81 total. Universities received \$4.4 billion; non-university institutions \$1.8 billion; and vocational training \$1.3 billion.

#### 4.1.2 History of education

The earliest organized forms of education in the territory that was to become Canada were under church control. Quebec was founded as a colony of France in 1608 and the first school soon opened. But it was not until 1824 that Quebec passed an education act. Nova Scotia had done so in 1766, followed by New Brunswick in 1802 and Ontario in 1807. However, education at lower levels continued to be church-dominated until the mid-19th century.

During the 1840s and 1850s a public system of education was developed in Quebec (Canada East), supplemented by schools and colleges operated by Roman Catholic orders. At the same time, Ontario

(Canada West) also established a public system, as did the Maritimes (New Brunswick, Nova Scotia and Prince Edward Island). Higher education before Confederation was conducted in private institutions, most controlled by religious authorities.

**Constitutional responsibility.** The Constitution Act, 1982, re-enacted the provisions of the Constitution Act, 1867, formerly called the British North America Act, 1867, which placed education “exclusively” under the control of each province, confirming variations in the systems that already existed in Ontario, Quebec, New Brunswick and Nova Scotia. As other provinces were admitted (Manitoba 1870, British Columbia 1871, Prince Edward Island 1873, Saskatchewan and Alberta 1905 and Newfoundland 1949) the provisions of the section were reaffirmed.

Officially the act recognized no federal presence in education. However, the federal government assumed direct responsibility for the education of persons beyond the bounds of provincial jurisdiction — Indians and Inuit, armed forces personnel and their families, and inmates of federal penal institutions. As the education enterprise expanded, indirect federal participation in the form of financial aid became extensive.

**Growth in education.** Until the late 1940s, Canada, according to a report by the Organization for Economic Co-operation and Development, was “one of the less educationally developed of the great democracies”. Today Canada ranks among the world’s educational leaders. This evolution was compelled by unprecedented population growth combined with the desire of students to continue to higher levels.

The population grew because of the post-war baby boom and sizable net immigration. Rising expectations and widespread belief in education as a means of upward mobility encouraged students to stay in school longer. In the post-war period Canada’s enrolment increased faster than that of any other industrialized country. Between 1951 and 1971 elementary-secondary enrolment more than doubled. The 1960s were the decade of fastest growth, with the number of elementary-secondary students increasing

40%, and postsecondary enrolment 170%. Enrolment reached its peak in 1970-71.

During the 1960s, education expenditures grew at an average yearly rate of more than 10% (sometimes 20%) to \$7.7 billion in 1970. These expenditures were equivalent to 9% of GNP and absorbed 22% of government spending, more than any other major area. In 1980 and 1981 expenditures on education represented an estimated 7.8% of GNP and social welfare had assumed first place.

The drop in the birth rate and lower levels of immigration have produced an enrolment decline in elementary-secondary schools that is expected to persist through the 1980s. The 1970-71 peak is unlikely to be attained again this century.

#### 4.1.3 Provincial administration

Each province and territory is responsible for its own education system. As a consequence, organization, policies and practices differ. Each province has a department of education headed by a minister who is an elected member of the provincial cabinet or, in the case of the territories, a councillor. Some provinces have established separate departments for postsecondary education. Where two departments exist there may be two ministers, or one may have dual jurisdiction.

While the education minister has general authority, day-to-day operation of the department is carried out by a deputy minister who advises the minister and supervises all functions of the department. These include: supervision and inspection of elementary and secondary schools; provision of curriculum and school organization guidelines; approval of new courses and textbooks; production of curriculum materials; finance; teacher training and certification; prescription of regulations for trustees and teachers; research; and support services such as libraries, health and transportation.

In most provinces, responsibility for teacher training has been transferred from teachers' colleges to faculties or colleges of education in universities. Increasingly, an elementary teacher must have a bachelor's degree. The Nova Scotia Teachers' College is the only remaining institution of its kind.

Other provincial departments have some responsibility for education, operating apprenticeship programs, agricultural schools, reform schools and forest ranger schools.

**Levels of education.** Despite such variations as the ages of compulsory attendance, course offerings and graduation prerequisites, the education systems that evolved in each province basically consist of three levels: elementary, secondary and postsecondary. The number of years required to complete each level and the dividing lines between them differ from province to province.

## 4.2 Elementary and secondary schools

At the elementary and secondary levels, public schools, including Protestant and Roman Catholic separate schools, are operated by local education authorities according to public school acts of the provinces. Private schools are operated and administered by individuals or groups. Schools for the handicapped, most under direct provincial government administration, provide special facilities and training. Federal schools are administered directly by the federal government and include schools operated by the defence department for dependents of servicemen, and Indian schools operated by the Indian and northern affairs department.

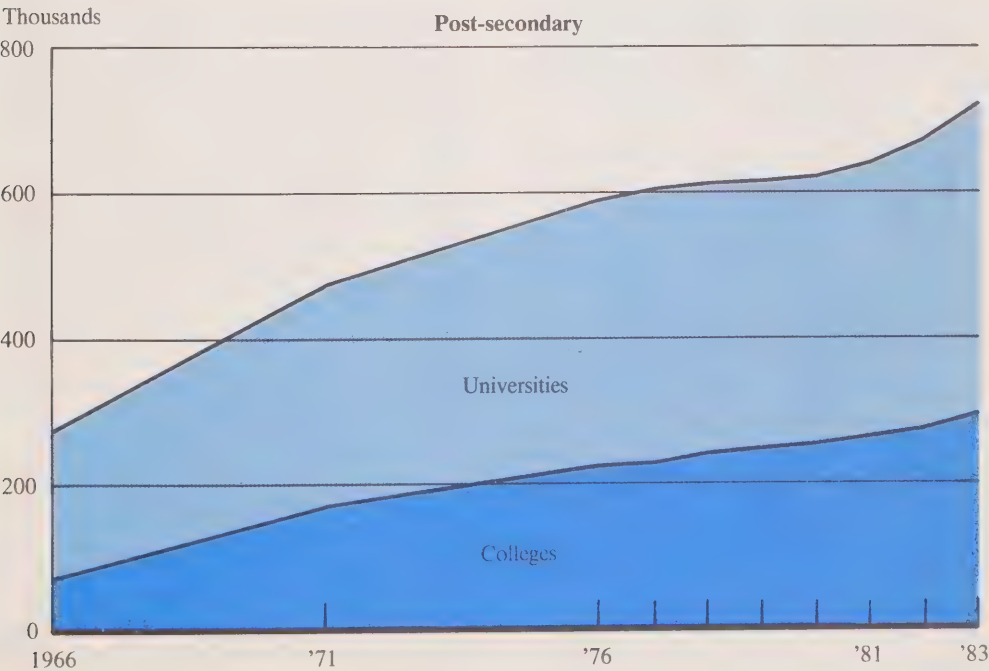
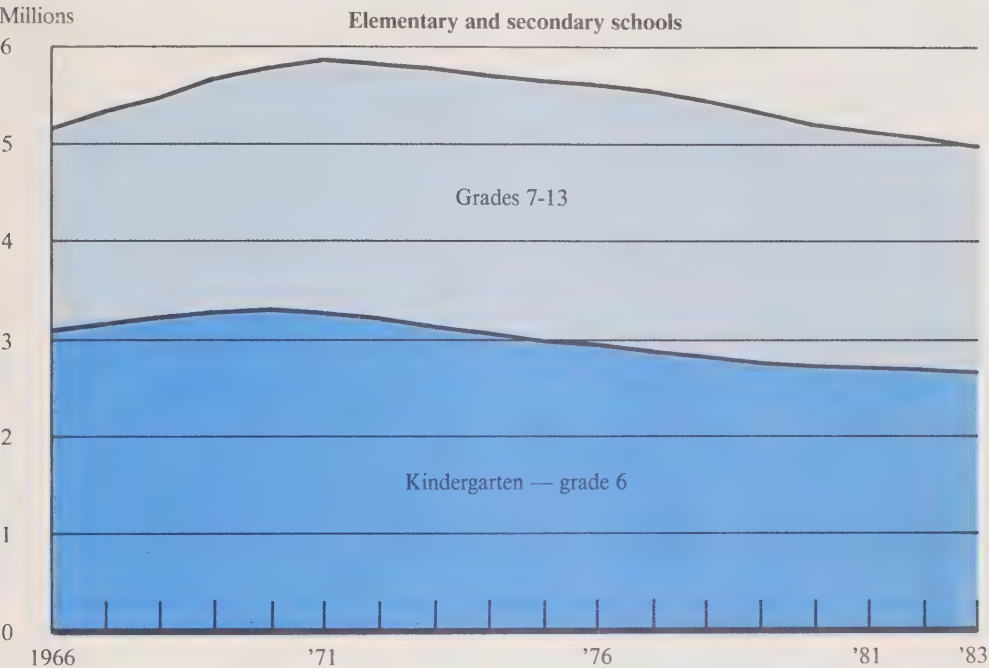
**Local administration.** Schools in all provinces are established under a public school act and operated by local authorities answering to the provincial government and resident ratepayers. Provincial authorities delineate school board areas and the responsibilities of boards. With the growth of cities and towns, and of educational facilities and requirements, small local boards have been consolidated into central, regional or county units with jurisdiction over both elementary and secondary schools in a wider area. The boards, composed of elected or appointed trustees or commissioners, are responsible for school management. Their powers, determined and delegated by the legislature or education departments, vary from province to province. Generally, they handle the business aspects of education — establishment and maintenance of schools, appointment of teachers, purchase of supplies and equipment, details of school construction and budget preparation. Boards are authorized to levy taxes or to requisition taxes from municipal governments and manage grants from the department.

**Grade structure.** School attendance is compulsory for about 10 years in every province — the starting age is 6 or 7, and the minimum leaving age, 15 or 16. However, the elementary-secondary program usually extends over 12 years. Local authorities may also provide an introductory year of education before grade one, or children of pre-elementary age may attend private kindergartens, which operate under varying degrees of provincial supervision.

At one time secondary schools were predominantly academic and prepared students for university. Vocational schools were separate institutions, located only in large cities. Today, in addition to technical and commercial high schools, most secondary institutions are composite or comprehensive. Programs include both purely academic courses as a prelude to university, and vocational courses ranging from one to four years that prepare students either for an occupation or for further postsecondary education at a community college.

The principle of promotion by subject has been implemented to a large extent in secondary schools.

Chart 4.1  
Enrolment in schools, colleges and universities, 1966-83



Some jurisdictions have partially or entirely eliminated age-grouped classes. The length of schooling depends on accumulation of a requisite number of credits. Most provinces have abolished external graduation examinations administered by the education department; schools conduct their own. Graduation certificates are issued by the province on the recommendation of individual schools.

#### 4.2.1 Other types of schools

**Separate schools.** One obvious difference among provincial education systems is provision for separate schools. Some provinces allow religious groups to establish schools under the authority of the education department. They must conform to department regulations on curriculum, textbooks and teacher certification. As legal corporations, separate school boards can levy taxes and receive government grants.

**Private schools.** About 4% of all elementary-secondary students attend schools operated independently of the public systems. Provincial policies on private institutions vary from direct operating grants to minimum provincial support.

**Special education.** A number of strategies have been developed to educate children with special needs or abilities, an estimated 5%-10% of all students. They may be accommodated in separate institutions, public or private, or in special or integrated classes in regular schools. For academically gifted students there are enriched and accelerated elementary and secondary programs. Schools for the blind and deaf are generally administered directly by a province, sometimes by interprovincial agreement. Many local systems provide special schools or classes for children with learning disabilities.

#### 4.2.2 Federal schools

Although education is primarily a provincial responsibility, the federal government has assumed direct control over the education of persons beyond the jurisdiction of the provinces — native peoples, armed forces personnel and their families and inmates of penitentiaries.

**Department of Indian and Northern Affairs.** Education of registered Indian and Inuit children is an obligation of the Indian and northern affairs department. The minister is authorized to maintain schools for Indian children directly or provide access to educational services in public or private schools.

The federal government owns and operates some 170 schools on Indian reserves. Although the minister makes regulations on matters such as curriculum, buildings, inspection and teaching, about 180 native band councils manage their own schools.

The Indian and northern affairs department co-operates with Yukon and Northwest Territories departments of education to educate native children.

Across Canada about half the native children attend provincial public schools. The federal government reimburses the provinces, either by paying tuition or contributing to the school's capital costs.

Counselling units are maintained in Ottawa and Winnipeg to assist northern native students attending high school, technical school, college and university in southern Canada. These units were established in the mid-1960s and have worked with an increasing number of students each year.

**Department of National Defence** maintains schools for dependents of service personnel at military establishments in Canada and overseas. The curriculum of DND schools in Canada follows that of the province where they are located. The policy is to avoid building schools wherever the children can attend existing institutions. Provinces are reimbursed on a per-pupil basis for armed service dependents in public schools. There are 10 overseas schools — in Belgium, the Netherlands and the Federal Republic of Germany. In English schools, the curriculum to grade 8 is not patterned after any province; grades 9-13 follow the Ontario curriculum. In French schools, all grades follow the Quebec curriculum.

#### 4.2.3 Financing the system

In 1980-81, expenditures on the elementary-secondary level were estimated at \$15.3 billion, and in 1979-80, at \$13.5 billion. Each year this was nearly 67% of all education spending.

Financing elementary-secondary education was traditionally a municipal responsibility, local real estate taxes paying most of the cost of basic education. School boards determine their budgets and thus the taxes required. In most cases municipalities levy and collect taxes for the boards. Where there is no municipal organization the boards have these powers. Taxes on real estate are still a vital element of elementary-secondary finance but the municipal share has declined in recent years to just over 30%; in 1960 it was 60%.

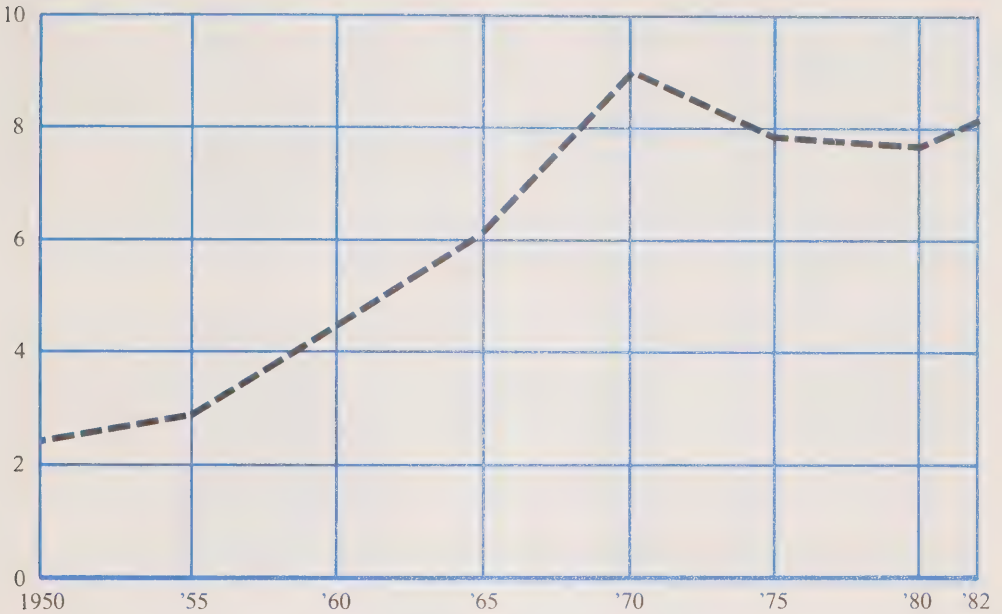
The relative contributions of the two levels differ from province to province. A system of formula financing determines distribution. The intention is first to secure minimum standards, and second to moderate differences of wealth and income in different localities.

Part of the support actually comes from the federal government, channelled through the provinces. Direct federal expenditures cover some 3% of the elementary-secondary total, including what was spent on Indian and overseas schools. The federal government also contributes to elementary-secondary education under a federal-provincial program for the development of bilingualism in education.

Chart 4.2

**Education expenditures as a percentage of gross national product, 1950-82**

Per cent



### 4.3 Postsecondary education

#### 4.3.1 Universities and degree-granting colleges

Several types of degree-granting institutions exist in Canada. Universities have, as a minimum, degree programs in arts and sciences; liberal arts colleges are smaller institutions with degree programs, usually only in arts; theological colleges grant degrees exclusively in theology; other specialized colleges offer degree programs in a single field, such as engineering, art or education. There are more than 60 degree-granting institutions in Canada.

**History.** The first institutions in Canada followed European models. The Séminaire de Québec, founded in 1663, was the base upon which Université Laval was established in 1852. The oldest English-language institution, King's College, at Windsor, NS opened in 1789. By 1867 Quebec had three universities and 712 classical colleges. There were three universities in New Brunswick, five in Nova Scotia and seven in Ontario. As well as in Nova Scotia, King's colleges had been established in New Brunswick and Ontario. Queen's and Victoria universities, supported by the Presbyterian and Methodist churches, had been chartered in Ontario. Their purpose was to train clergy and a small, select group of laymen who wished to enter the professions. Teaching concentrated on theology, philosophy, the classics, medicine and law.

About the middle of the 19th century McGill University introduced courses in natural sciences, opened a normal school for elementary teachers and pioneered instruction in applied science and engineering. Similar changes were taking place at other universities — Dalhousie in Halifax, Queen's in Kingston, and the University of Toronto.

While the trend in English-language institutions was toward practical and scientific studies and secular control, in the French-language sector emphasis continued on classical studies under clerical control.

When the four western provinces were settled, other structures began to emerge. The American example of land-grant colleges led to a strong commitment to extension programs and community service. The University of Manitoba was granted a charter in 1877. Provincial universities were established in Alberta in 1908 and in Saskatchewan in 1909. The University of British Columbia, although chartered in 1908, did not open until 1915. By the outbreak of World War I, a score of universities in Canada had developed distinctive characteristics. To the traditional faculties of theology, law and medicine, schools of engineering, agriculture, forestry, education, dentistry and home economics had been added.

There was some institutional expansion after World War I. In 1939 Canada had 28 universities, varying in size from the University of Toronto with full-time enrolment of about 7,000 to institutions with fewer than 1,000 students. There were about 40,000 students, representing 5% of the population between the ages of 18 and 24.

Radical changes began after World War II. As a result of a veteran's rehabilitation program, 53,000 ex-soldiers entered the universities between 1944 and 1951. The immediate problem of space was solved by temporary buildings and creation of satellite colleges. By the mid-1950s, places vacated by veterans had been filled with an increasing number of high school graduates. Demands for university expansion continued, but the full force of this pressure came in the 1960s when enrolment rose from 128,600 in 1961-62 to 323,000 in 1971-72. During the 1970s enrolment fell in some years, despite the continued increase in the population aged 18 to 24 years.

In the early 1970s growth rates began to decline. Enrolment in most universities was below forecasts and larger numbers of students withdrew before completing their degrees. Part-time students began to increase more rapidly than those registered for full-time study. A decline in full-time enrolment was expected in the 1980s, although interest in part-time and extension study continued to grow.

**Curriculum.** Admission to university is usually after 11 to 13 years of schooling. Each institution controls its admission standards and policies. With provincial examinations discontinued in recent years, the school record has become the main basis for judging applicants. It is customary for students to enter directly from high school, except in Quebec where they qualify through the *collèges d'enseignement général et professionnel* (CEGEPs). Most universities provide for the admission of mature students, including those who do not meet normal entrance requirements.

The first or bachelor's degree is awarded after three or four years of full-time study. Admission to law, medicine, dentistry, business administration and theology is usually conditional upon completion of part or all the requirements for the first degree. A distinction may be made between general and honours degrees; the latter are more specialized and sometimes require an additional year of study. A bachelor's degree at the honours level or the equivalent is necessary for acceptance into a master's program of one or two years of study. Entrants to doctoral studies must have a master's degree or equivalent in the same field.

Some universities are bilingual, the University of Ottawa and Laurentian University of Sudbury being notable examples. Instruction is offered in both

English and French. Other universities conduct classes in one language only but permit students to submit term papers, examinations and theses in either French or English.

**Teaching staff.** During the 1960s the demand for growth necessitated rapid and massive staff recruitment. From about 7,000 in 1960-61, the full-time teaching force has increased to more than 30,000. Most new appointees were Canadians but the number from other countries was significant. Recent changes in immigration and employment requirements are aimed at ensuring that foreign faculty are hired only after all efforts to recruit qualified Canadians have been exhausted.

**Students.** The 376,300 full-time students in Canadian universities in 1980-81 were equivalent to 11.2% of the population age 18 to 24 and about double the proportion in 1960. In addition, 245,000 part-time students were registered in degree programs.


Tuition fees usually differ from one university to another and from one faculty to another. In Alberta, Ontario, Quebec and some universities in New Brunswick and Nova Scotia, higher fees are required of foreign students. In the early 1960s one-quarter of university income was derived from student fees, but with the increase in public funding this proportion has been reduced to approximately one-eighth. An estimated 40% of all students take advantage of the federal student loans plan.

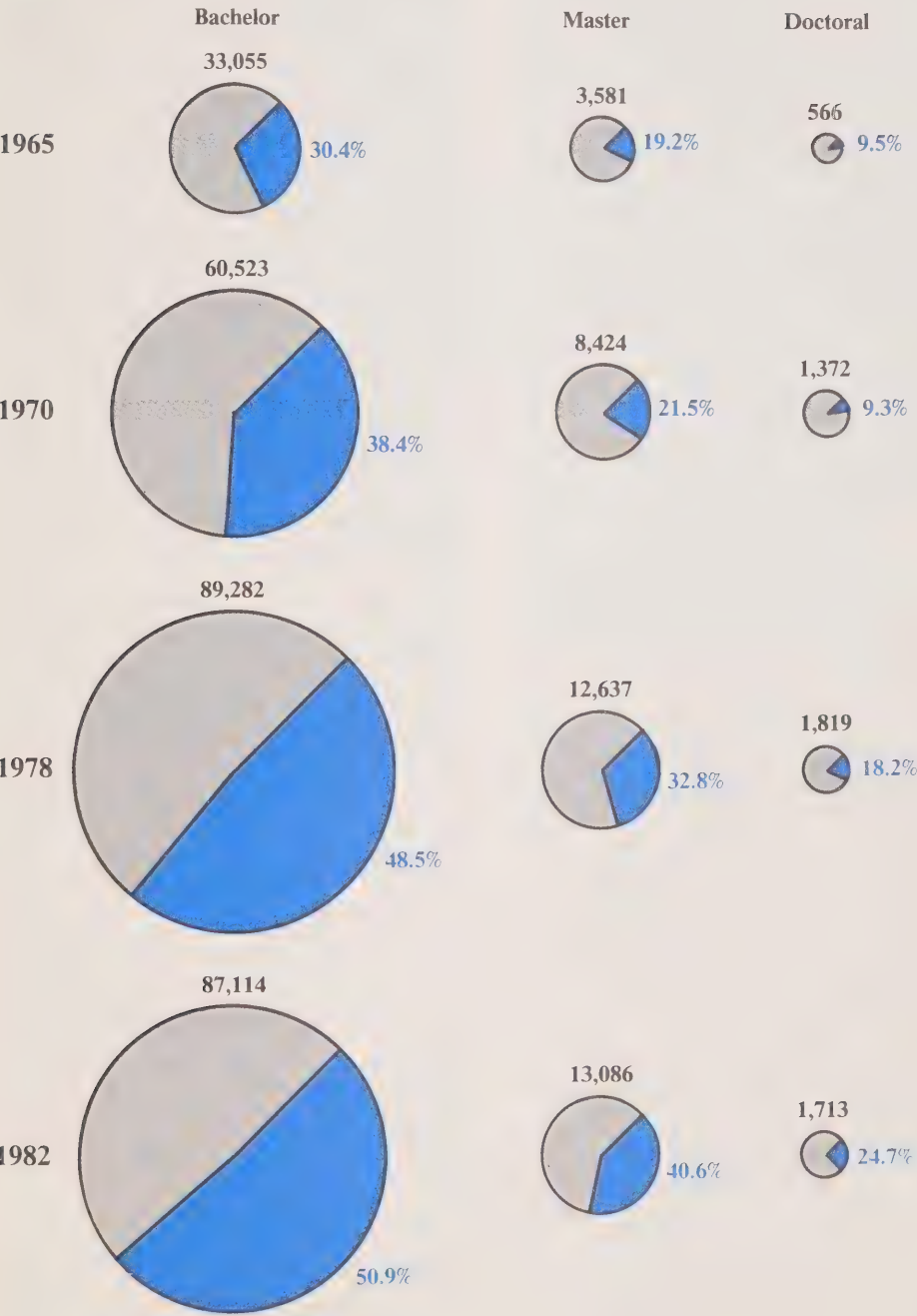
**Finance.** The 1960s marked a turning point in higher education finance as governments began to assume a major share of support. From the beginning of that decade, expenditures rose from about \$273 million to more than \$1.2 billion in 1967-68, and to an estimated \$4.4 billion in 1980-81. Together, federal and provincial governments contributed more than 82% of the total.

The Federal-Provincial Fiscal Arrangements Act extended over the five-year period 1967 to 1972. It was renewed for two years in 1972 and for another three in 1974. A new condition stipulated that the total increase in the federal share for any given year would be limited to 15% of the preceding year.

This agreement expired on March 31, 1977. It was replaced by the Established Programs Financing (EPF) plan covering education, hospital insurance and medicare. Half the federal payment consisted of a transfer of tax points to the provinces (13.5 points of personal income tax and one point of corporation tax). The other half was a per capita cash grant. It was expected that the tax portion, based on 1975-76, would grow with the tax base, while per capita grants would increase in relation to the gross national product.

Chart 4.3  
University degrees awarded, selected years, 1965- 82

 Percentage awarded to females



### 4.3.2 Community colleges

Traditionally, higher education was the almost exclusive preserve of universities. Now, although universities still account for about 60% of full-time students, postsecondary education is conducted in about 200 other institutions without degree-granting status which, with support from provincial and federal governments, have developed since 1960 as an alternative to university. A community college is any public or private non-degree-granting institution which provides postsecondary university transfer programs or semi-professional career programs, as well as other credit or non-credit educational programs oriented to community needs. In Quebec completion of a two-year college level program is required for university admission. While the term "community college" is used to refer to these establishments in a general sense, there is a variety of designations: colleges of applied arts and technology in Ontario; colleges of general and vocational education in Quebec (CEGEP, an acronym from the French designation *collèges d'enseignement général et professionnel*); institutes of applied arts and sciences in Saskatchewan; institutes of technology or technical institutes; colleges of agricultural technology; and colleges providing training in other specialized fields, such as fisheries, marine and paramedical technologies.

Hospital schools of nursing are not considered community colleges, but do comprise part of non-university enrolment. Many provinces have transferred nursing training to community colleges.

**History.** Not until the 1960s, often on the recommendation of special commissions, did the provinces attempt to organize postsecondary non-university education into a community college system, either by transforming older institutions or founding new ones. Colleges are based on the philosophy that educational opportunities should extend beyond existing schools and universities to include a broader segment of society. Criteria of admission are flexible. Secondary school graduation is normally required but in some institutions mature student status allows otherwise ineligible applicants to enter. Qualifying programs are also offered to help them attain the appropriate academic level.

**Organization.** The recent development, structure and organization of postsecondary non-university education differ from province to province. Not all institutions were transformed into community colleges and amalgamated into a province-wide network. A number operate privately. However, the provinces are partially or totally responsible for co-ordinating, regulating and financing community colleges. Some provincial governments finance them completely, while others do so in part. Similarly, the colleges' local autonomy varies.

There are four main patterns of provincial government management: (1) direct establishment and operation, largely confined to institutes of technology in the West and the Atlantic provinces; (2) a triangular partnership between the government, colleges and school district boards, existing only in British Columbia; (3) much delegation of provincial administrative responsibility to college boards, co-ordinated by a provincial commission or board, as in Ontario and New Brunswick; and (4) a partnership between the department of education and college boards supplemented by non-governmental college associations, as in Quebec.

**Curriculum.** Colleges offer three basic programs: university transfer, technical (semi-professional career) and trades. The first enables students to proceed to university with degree credit of one or two years. The latter two prepare them for direct entry into the labour force. Technical programs take at least one academic year but more often two or three, and sometimes four.

Quebec students who wish to attend university must first complete two preparatory years in a college of general and vocational education. By contrast, Ontario's colleges of applied arts and technology do not maintain a transfer program; however, Ontario universities have agreed to admit with advanced standing college graduates on the basis of individual merit.

**Staff.** Unlike university faculty who are obliged to conduct scholarly research in addition to teaching, community college staff concentrate almost exclusively on instruction. From an estimated 4,900 in 1964-65, the number of full-time teachers at the postsecondary level in non-university institutions rose to 20,400 in 1980-81.

**Students.** Total full-time enrolment in postsecondary, non-university programs in 1980-81 was 260,800, a 3.4% increase over 1979-80. About 70% of the students were in community college technical programs. The other third were taking university transfer programs. Half the students were female. While women predominated in career programs, they were outnumbered by men in transfer programs. Quebec students accounted for 52% of the total. Enrolment in Ontario represented nearly 30%, followed by Alberta and British Columbia (7% each).

**Nursing.** In 1964 Toronto's Ryerson Institute of Technology became the first non-hospital institution to provide nurses' training. Since then, most diploma programs have been transferred from hospital schools to community colleges. The former no longer exist in Quebec, Ontario or Saskatchewan. In the other western provinces, training is still offered in hospital schools but programs are also available in community colleges. Only in the Atlantic region is nursing training carried out exclusively in hospital schools.

### 4.3.3 Technical and trades training

Technical and trades training varies between and within provinces. It is offered in public and private institutions such as community colleges, institutes of technology, trade schools and business colleges. It may also take place on the job, in apprenticeship programs or in training programs of industry.

**History.** Early in the 20th century, the rapid growth of industrialization gave added importance to technical skills. Since public schools or universities rarely gave such instruction, this was one of the first areas of education in which the federal government became actively involved. In co-operation with several provinces, an agricultural training program was set up in 1913. Three years earlier the Royal Commission on Industrial Training and Vocational Education had made recommendations, a number of which were implemented in the Technical Education Act of 1919. Under the act, federal authorities offered to support provincial programs but few provinces were ready to participate. By World War II, however, enough programs had been instituted to warrant appointment of a national council of federal, provincial and public representatives to advise the labour minister on matters relating to vocational education. At that time most vocational institutions were administered by a variety of provincial government departments such as labour, agriculture, commerce and industry.

During the 1950s a shortage of technical manpower prompted federal officials to give the provinces more aid for vocational training. By 1960 about 30 technical institutes had been opened. The Technical and Vocational Education Act, designed to encourage the provinces to extend and improve facilities, was passed in 1961. Thereafter, new comprehensive schools frequently incorporated vocational programs. Federal participation increased after 1966 with adoption of the Adult Occupational Training Act and purchase of courses given in various types of provincial institutions. Under this act, a training-in-industry program was inaugurated in 1967 and a training-on-the-job program in 1971. Both were superseded by an industrial training program in 1974.

**Institutions and programs.** Technical career programs are conducted in community colleges and related postsecondary institutions. High school graduation is usually required for admission. In programs lasting up to four years, students are trained to practise a career directly upon graduation. Some community colleges also give vocational instruction but graduates of career programs are generally qualified for semi-professional work.

Trades level courses emphasize manipulative skills and performance of established procedures and techniques. Less than one year is normally needed to complete them. Grade 9 or 10 is usually required for entrance but prerequisites vary.

Public trade schools and vocational centres concentrate on vocational skills and are administered by a provincial department. They may be separate establishments, but in most provinces they now exist as divisions of a community college. Only persons who have left the regular school system and are older than compulsory age may attend. High school graduation is not usually required. Depending on the province and the trade, admission standards can range from grade 8 to grade 12. Included in this group are adult vocational centres and schools related to specific occupations such as police work, forestry and nursing.

A number of institutions offer academic upgrading courses designed to raise a trainee's general level of education in one or a series of subjects. Courses may be taken to qualify for admission to higher academic studies or vocational training. The federal government sponsors basic training for skill development in community colleges and adult vocational centres. However, completion of levels corresponding to the final grades of secondary school does not give high school graduation status.

Rather than attend an educational institution, individuals may acquire trades training as they work, related to a specific trade or occupation. Training on the job is organized instruction offered in a production environment.

Business and industrial establishments train new employees, retrain experienced workers or upgrade their qualifications. Publicly supported, in full or in part, or entirely financed by the company, training can be on the job, by classroom instruction, or a combination of the two. Under cost-sharing agreements the federal government reimburses companies that provide training. The provincial governments monitor the publicly supported company programs and approve them for federal support.

Apprenticeship programs combine on-the-job training with classroom instruction. Persons contract with an employer to learn a skilled trade and eventually reach journeyman status. Apprentices may be registered with a provincial or territorial labour or manpower department. The department sets standards for journeyman qualification: minimum age, educational levels for admission, minimum wages, duration of apprenticeship and the ratio of apprentices to journeymen. Non-registered apprentices enter into a private agreement with an employer, perhaps in association with a labour union. They are not subject to regulations established by the provincial department for that trade.

The federal Vocational Rehabilitation for Disabled Persons Act facilitates trades-training for the handicapped. The federal government reimburses the provinces for 50% of costs for programs that enable disabled people to support themselves fully or partially. The provinces provide training directly in

community colleges and trade schools or purchase it from the private sector or voluntary agencies. Quebec does not participate.

In co-operation with the provinces, the federal government has introduced standard interprovincial examinations to promote the mobility of journeymen. Those who pass examinations in certain apprenticeship trades have an interprovincial seal attached to their certificate, allowing them to work in any province.

#### 4.3.4 Continuing education

Continuing or adult education is adapted to the needs of persons not in the regular system. Out-of-school adults (15 and older) are able to pursue accreditation or to advance their personal interests. Continuing education is given by school boards, provincial departments of education, community colleges and related institutions, and universities. Programs are also conducted or sponsored by non-profit organizations, professional associations, government departments, business and industry. Instruction is not centred exclusively around institutions; it is also available by correspondence course, from travelling libraries and over radio and television.

**History.** School boards and provincial departments of education have conducted evening classes for adults since the turn of the century. Rapid development occurred after World War II. By the late 1950s more than 445,000 enrolments in academic and vocational courses were reported.

At the postsecondary level, extension programs have been part of some universities for many years. Probably most successful were those in the provincial universities of the West. Agricultural extension education was provided in Alberta and Saskatchewan; at St. Francis Xavier University in Nova Scotia, fishermen's co-operatives were organized. Besides these practical and vocational programs, other cultural and recreational services were developed by several urban universities in central Canada. Some courses were for academic credit, others not. Many were offered only on campus, others in external centres as well.

**Programs and courses.** Credit courses sponsored by school boards and departments of education may be applied toward a high school diploma. Credits in academic or vocational subjects can be acquired through evening classes or correspondence study. Postsecondary credit courses count toward a degree, diploma or certificate.

In non-credit courses for personal enrichment or leisure use, instruction is given in hobby skills (for example, arts and crafts), social education (health and family life), recreation (sports and games), and driver education. Professional development and refresher courses are also available.

Both programs include formal and non-formal courses. Formal courses are structured units of study

presented systematically. Non-formal courses are activities for which registration is not required but where attendance for a scheduled period is necessary.

**Elementary-secondary institutions.** Each province and territory has its own method of conducting continuing education. Administrative control is usually assigned to individual school boards, but a variety of funding schemes has resulted in programs of different size. Continuing education is best developed under the jurisdiction of large, urban-based boards.

### 4.4 Federal involvement

#### 4.4.1 Department of National Defence

The defence department instructs and trains members of the armed forces and is responsible for the schooling of children of service personnel in government quarters.

The Canadian Forces Training System (CFTS) plans, conducts and controls all recruit, trades, specialist and officer classification training. Five bases and 20 schools across Canada are under CFTS jurisdiction. Responsibility for individual training is assigned to designated commands, but when the trade or classification is used by more than one command, CFTS takes over.

The main concern of the CFTS is recruit training, which covers a period between enlistment and acquisition of a basic trade. A trades training branch offers more specialized instruction at 11 trade schools. Training covers 15 officer classifications and 64 trades, including aerospace engineering, air traffic control, communication and electronics engineering, land ordnance engineering, military engineering, logistics, medical and dental training, security, administration and military bands.

CFTS also conducts and supports the activities of more than 12,000 sea, army and air cadets.

**Military colleges.** The department of national defence finances and controls three tuition-free colleges: the Royal Military College of Canada (RMC) in Kingston, Ont., Royal Roads Military College (RRMC), Victoria, BC, and the Collège militaire royal (CMR) de Saint-Jean in Saint-Jean, Que.

These institutions educate and train officer cadets and commissioned officers for careers in the Canadian forces.

RMC was founded in 1876 and accorded degree-granting status in 1959. RMC accepts senior matriculants and offers four-year degree programs in arts, engineering and science, and graduate studies in selected disciplines.

RRMC was established in 1942 as a naval cadet college. It became a Canadian services college in 1948 and was accorded degree-granting status in 1975. RRMC accepts senior matriculants in arts, engineering and science, and also offers a science degree with a major in physics and physical

oceanography. Third-year cadets in other disciplines complete their degrees at either RMC or CMR.

CMR was established in 1952, and since 1971 has been affiliated with l'Université de Sherbrooke, which confers degrees on CMR graduates. CMR accepts junior or senior matriculants in arts, science, administration and engineering, but offers degree programs in only the first three of these disciplines. After the second year, cadets go to RMC for engineering or to RRMC for oceanography.

**Officer professional development.** The department of national defence provides professional development training to selected officers and federal government executives through staff and defence colleges, foreign staff and defence colleges, and a management development school.

**Academic upgrading.** A University of Manitoba CF program, begun in 1974, allows military personnel and their dependents to work toward a degree.

Formal university education is also available to service personnel through a university training plan. Selected officers and other ranks may complete a university education already begun on their own initiative. Most candidates complete their studies at one of the three military colleges, or if the program is not offered there, at a university.

Under a postgraduate training program, the department sponsors studies in advanced technology and management fields at domestic and foreign institutions.

A military medical training plan and military legal training plan provide up to five years subsidization, including internship and articling, to complete a medical or legal degree.

**Trades accreditation.** To gain recognition for training and experience acquired by Canadian forces members, and so facilitate their return to civilian life, a military-civilian training accreditation committee was set up in 1974.

#### 4.4.2 Other federal programs

The Public Service Commission provides federal public servants with refresher and upgrading courses, study grants, career development opportunities, and language training. The veterans affairs department provides allowances and pays fees for the postsecondary education of children of persons whose deaths were due to military service. The department of the solicitor-general has an educational program for inmates of federal penal institutions. Full- and part-time instruction is offered in vocational and academic subjects, sometimes with credit given by provincial authorities. A day-parole system allows some prisoners to attend secondary schools, colleges and universities. The Canadian International Development Agency (CIDA) operates and administers a technical assistance program in developing countries.

#### 4.4.3 Indirect participation

The growth of education, both in size and importance, made it almost inevitable that the federal government would play some role in its development even though the BNA Act restricted direct participation. Many departments have educational functions, but they tend to take a financial form such as grants for postsecondary and minority language education, funds for citizenship and language instruction for immigrants, and sponsorship of manpower training programs. A number of federal bodies make significant contributions.

**Department of the Secretary of State.** In 1963 the education support branch of the secretary of state department was established to advise the cabinet on postsecondary education. In 1967 it became responsible for administering those parts of the Federal-Provincial Fiscal Arrangements Act related to postsecondary finance. By 1973 the branch's authority had been enlarged to include the development, formulation, implementation and review of all federal policies and programs on education. This entailed communication with provincial governments, the academic community and national organizations, and co-operation with the external affairs department to co-ordinate Canada's international efforts.

In addition to administering postsecondary adjustment payments, the branch took over the student loans plan from the finance department in December 1977. Students had received direct aid since 1939. However, not until 1964 was a comprehensive scheme adopted to assist those whose financial circumstances would prevent them from carrying on full-time postsecondary studies.

Under the plan the government guaranteed loans made by chartered banks and other designated lenders to students on the basis of certificates of eligibility issued by participating provinces. The federal government carried the cost of interest payments on these loans while students continued full-time studies and for six months after. There was no age limit for borrowing. All provinces participated except Quebec, which had its own student assistance scheme. After July 1975 the maximum amount students could borrow over the course of their studies was \$9,800. The repayment period could extend up to 10 years from the time a borrower left the educational institution. The act provided for basic allocations to each province and also supplementary allocations to compensate for differences in relative demand based on provincial populations between the ages of 18 and 24.

The revenue department gave students further financial aid. In 1961 they were permitted deduction of tuition costs from taxable incomes and in 1972 education expenses up to \$50 a month also became deductible.

**Official languages in education.** The federal government has been providing financial assistance to the provinces and territories to encourage opportunities for education in the minority official language and for Canadians to acquire a knowledge of their second official language. Started in 1970, the program has been administered by the language programs directorate of the department of the secretary of state and functioned under federal-provincial agreements for 1970-74 and 1974-79. Interim arrangements were in effect for 1979-81.

Federal funding to the provinces consisted of formula payments based on average provincial costs of education and enrolment in the programs.

A number of non-formula programs for specific provincial activities and initiatives also received federal support, such as special projects, language training centres, minority official language teacher training, official language fellowships, teacher bursaries, travel bursaries, summer language bursaries, official language monitors. Some of these programs, while funded by the secretary of state department, were administered by the council of ministers of education.

From 1970-71 to 1980-81 total formula contributions to the provinces amounted to just over \$1.25

billion. Contributions under non-formula programs totalled \$179 million for a combined total federal contribution in support of bilingualism in education of \$1.4 billion.

**Research support programs.** The federal government operates a number of programs to promote research in the physical and natural sciences, social sciences, arts and humanities. The main channels for this support are the Natural Sciences and Engineering Research Council, the Medical Research Council and the Social Sciences and Humanities Research Council. An inter-council committee co-ordinates their policies. Other agencies and departments such as the Atomic Energy Commission, Canada Mortgage and Housing Corporation and the departments of agriculture and health and welfare also contribute to research. Support may consist of capital grants, operating grants, research grants, and contracts, scholarships and awards.

**Other participants.** The National Museums of Canada, the National Gallery, the National Film Board and the Canadian Broadcasting Corporation contribute directly or indirectly to various school programs.

#### Source

4.1 - 4.4 Prepared in Education, Culture and Tourism Division, Statistics Canada.

#### Selected references

*Decade of education finance, 1970-71 to 1979-80.* Statistics Canada 81-560, Ottawa, 1983.

*Education in Canada: a statistical review, 1982.* Statistics Canada 81-229, Ottawa, 1983.

*Education statistics for the seventies.* Statistics Canada 81-569, Ottawa, 1984.

*Financial statistics of education, 1981.* Statistics Canada 81-208, Ottawa, 1983.

*Historical compendium of education statistics: from confederation to 1975.* Statistics Canada 81-568, Ottawa, 1978.

TABLES

- .. not available

... not appropriate or not applicable

— nil or zero

- - too small to be expressed
- e estimate

p preliminary

r revised

certain tables may not add due to rounding

4.1 Enrolment in elementary and secondary schools

Type of institution and year	Province or territory						
	Nfld.	PEI	NS	NB	Que.	Ont.	Man.
Public							
1976-77	157,686	27,903	201,279	163,520	1,320,724	1,973,140	225,698
1977-78	156,168	27,628	198,097	162,229	1,260,983	1,950,308	221,408
1978-79	153,174	27,793	194,038	159,467	1,215,133	1,909,145	215,663
1979-80	150,382	27,277	189,225	156,385	1,174,552	1,866,107	208,770
1980-81	148,533	26,850	185,568	152,803	1,131,989	1,835,537	204,395
Private							
1976-77	293	—	1,410	393	89,401	58,226	7,642
1977-78	281	—	1,355	505	86,860	61,082	7,890
1978-79	288	—	1,363	682	85,961	64,148	8,324
1979-80	279	—	1,422	840	87,408	67,899	8,041
1980-81	274	52	1,455	1,035	88,758	74,292	8,446
Federal <sup>1</sup>							
1976-77	—	58	646	837	4,894	7,080	7,402
1977-78	—	57	683	824	4,800	7,429	7,696
1978-79	—	47	826	852	3,140	7,468	8,321
1979-80	—	49	786	841	3,130	7,279	8,478
1980-81	—	32	832	837	3,196	7,189	9,059
Schools for the blind and the deaf							
1976-77	117	16	480	—	1,040	1,126	156
1977-78	101	14	489	—	915	1,074	159
1978-79	103	13	584	—	850	1,065	162
1979-80	123	16	567	—	815	1,063	152
1980-81	115	16	586	—	746	1,058	157
Total							
1976-77	158,096	27,977	203,815	164,750	1,416,059	2,039,572	240,898
1977-78	156,550	27,699	200,624	163,558	1,353,558	2,019,893	237,153
1978-79	153,565	27,853	196,811	161,001	1,305,084	1,981,826	232,470
1979-80	150,784	27,342	192,000	158,066	1,265,905	1,942,348	225,441
1980-81	148,922	26,950	188,441	154,675	1,224,689	1,918,076	222,057
	Sask.	Alta.	BC	YT	NWT	Canada <sup>1</sup>	
Public							
1976-77	219,191	441,070	536,237	4,866	12,906	5,284,220	
1977-78	216,248	439,804	527,769	5,394	12,717	5,178,753	
1978-79	211,606	437,063	517,786	5,237	12,903	5,059,008	
1979-80	208,009	434,383	511,671	5,122	12,828	4,944,711	
1980-81	204,974	437,815	509,805	4,925	12,572	4,855,766	
Private							
1976-77	1,573	6,070	23,318	—	—	188,326	
1977-78	1,707	6,018	23,691	—	—	189,389	
1978-79	2,119	5,937	24,556	10	—	193,388	
1979-80	2,202	5,940	24,827	—	—	198,858	
1980-81	2,286	6,487	26,314	—	—	209,399	

## 4.1 Enrolment in elementary and secondary schools (concluded)

Type of institution and year	Province or territory					
	Sask.	Alta.	BC	YT	NWT	Canada <sup>1</sup>
Federal <sup>1</sup>						
1976-77	6,399	3,897	1,974	—	—	37,569
1977-78	6,984	4,018	2,560	—	—	39,100
1978-79	7,133	4,055	2,559	—	—	38,361
1979-80	6,763	4,029	2,698	—	—	37,935
1980-81	6,461	4,095	2,756	—	—	37,973
Schools for the blind and the deaf						
1976-77	136	185	244	—	—	3,500
1977-78	118	188	195	—	—	3,253
1978-79	121	194	161	—	—	3,253
1979-80	112	190	155	—	—	3,193
1980-81	111	196	165	—	—	3,150
Total						
1976-77	227,299	451,222	561,773	4,866	12,906	5,513,615
1977-78	225,057	450,028	554,215	5,394	12,717	5,410,495
1978-79	220,979	447,249	545,062	5,247	12,903	5,294,010
1979-80	217,086	444,542	539,351	5,122	12,828	5,184,697
1980-81	213,832	448,593	539,040	4,925	12,572	5,106,288

<sup>1</sup>Canada total also includes Department of National Defence schools overseas.

## 4.2 Full-time postsecondary enrolment in community colleges<sup>1</sup>

Province or territory and year		Career programs	University transfer programs	Total
Newfoundland	1978-79	1,960	—	1,960
	1979-80	2,019	—	2,019
	1980-81	2,225	—	2,225
Prince Edward Island	1978-79	770	—	770
	1979-80	782	—	782
	1980-81	820	—	820
Nova Scotia	1978-79	2,576	192	2,768
	1979-80	2,629	164	2,793
	1980-81	2,742	177	2,919
New Brunswick	1978-79	1,656	—	1,656
	1979-80	1,791	—	1,791
	1980-81	1,888	—	1,888
Quebec	1978-79	66,110	71,643	137,753
	1979-80	66,639	67,546	134,185
	1980-81	67,089	68,316	135,405
Ontario	1978-79	64,499	—	64,499
	1979-80	70,164	—	70,164
	1980-81	75,846	—	75,846
Manitoba	1978-79	3,110	—	3,110
	1979-80	3,057	—	3,057
	1980-81	3,459	—	3,459
Saskatchewan	1978-79	2,397	—	2,397
	1979-80	2,375	—	2,375
	1980-81	2,412	—	2,412
Alberta	1978-79	15,120	2,291	17,411
	1979-80	15,372	2,500	17,872
	1980-81	15,476	2,424	17,900
British Columbia	1978-79	9,690	7,754	17,444
	1979-80	10,114	6,994	17,108
	1980-81	10,481	7,472	17,953

## 4.2 Full-time postsecondary enrolment in community colleges<sup>1</sup> (concluded)

Province or territory and year		Career programs	University transfer programs	Total
Yukon	1978-79	—	—	—
	1979-80	—	—	—
	1980-81	—	—	—
Northwest Territories	1978-79	—	—	—
	1979-80	—	—	—
	1980-81	—	—	—
Canada	1978-79	167,888	81,880	249,768
	1979-80	174,942	77,204	252,146
	1980-81	182,438	78,389	260,827

<sup>1</sup>Includes related institutions such as hospital schools, agricultural, arts, and other specialized colleges.

## 4.3 Enrolment in universities

Province	Year	Full-time <sup>1</sup>			Part-time		
		Under-graduate	Graduate	Total	Under-graduate	Graduate	Total
Newfoundland	1978-79	5,718	443	6,161	2,867	340	3,207
	1979-80	6,074	355	6,429	3,213	304	3,517
	1980-81	6,270	293	6,563	3,479	473	3,952
Prince Edward Island	1978-79	1,390	—	1,390	817	—	817
	1979-80	1,332	—	1,332	724	—	724
	1980-81	1,321	—	1,321	705	18	723
Nova Scotia	1978-79	16,298	1,303	17,601	5,517	1,115	6,632
	1979-80	16,107	1,276	17,383	5,352	1,172	6,524
	1980-81	16,553	1,304	17,857	5,279	1,065	6,344
New Brunswick	1978-79	10,457	447	10,904	3,681	472	4,153
	1979-80	10,415	464	10,879	3,827	485	4,312
	1980-81	10,744	508	11,252	3,371	491	3,862
Quebec	1978-79	71,884	10,227	82,111	71,108	9,942	81,050
	1979-80	75,653	10,564	86,217	77,083	10,881	87,964
	1980-81	77,598	11,448	89,046	83,636	11,915	95,551
Ontario	1978-79	136,066	15,506	151,572	67,958	12,178	80,136
	1979-80	136,681	15,044	151,725	72,377	12,123	84,500
	1980-81	141,901	15,353	157,254	75,641	12,178	87,819
Manitoba	1978-79	15,087	1,583	16,670	9,587	1,476	11,063
	1979-80	14,379	1,585	15,964	9,498	1,422	10,920
	1980-81	14,612	1,594	16,206	9,930	1,516	11,446
Saskatchewan	1978-79	13,681	765	14,446	7,136	644	7,780
	1979-80	13,558	777	14,335	7,201	665	7,866
	1980-81	13,805	779	14,584	7,379	722	8,101
Alberta	1978-79	27,687	2,998	30,685	7,728	1,781	9,509
	1979-80	27,046	2,942	29,988	8,501	1,775	10,276
	1980-81	27,664	3,341	31,005	10,902	1,804	12,706
British Columbia	1978-79	26,876	3,350	30,226	10,292	1,702	11,994
	1979-80	26,924	3,713	30,637	11,476	1,787	13,263
	1980-81	27,447	3,775	31,222	12,671	1,953	14,624
Total	1978-79	325,144	36,622	361,766	186,691	29,650	216,341
	1979-80	328,169	36,720	364,889	199,252	30,614	229,866
	1980-81	337,915	38,395	376,310	212,993	32,135	245,128

<sup>1</sup>Excludes 6,207 interns and residents in 1978-79, 6,470 in 1979-80 and 6,307 in 1980-81.

# 4.4 Graduate degrees awarded by Canadian universities

Degree and field of study	Region and calendar year					
	Atlantic provinces		Quebec		Ontario	
	1979	1980	1979	1980	1979	1980
Master						
Education	427	397	442	541	1,306	1,253
Fine and applied arts	8	5	67	69	78	69
Humanities	93	102	459	475	1,036	926
Social sciences	289	225	1,082	1,197	2,399	2,445
Agriculture and biological sciences	44	40	125	128	215	231
Engineering and applied sciences	96	63	312	313	527	517
Health professions	34	33	202	171	172	244
Mathematics and physical sciences	58	43	209	219	372	357
Unclassified	—	—	—	2	—	—
Total	1,049	908	2,898	3,115	6,105	6,042
Doctorate						
Education	1	—	20	23	98	84
Fine and applied arts	—	—	1	1	10	8
Humanities	13	11	64	55	171	144
Social sciences	7	6	87	73	226	226
Agriculture and biological sciences	12	25	30	27	82	71
Engineering and applied sciences	11	5	43	42	125	101
Health professions	3	2	41	54	61	47
Mathematics and physical sciences	22	23	49	57	159	155
Unclassified	—	—	—	1	—	—
Total	69	72	335	333	932	836
	Western provinces		Canada			
	1979	1980	1979		1980	
				M %	F %	M %
Master						
Education	655	635	2,830	55	45	2,826
Fine and applied arts	66	53	219	46	54	196
Humanities	273	289	1,861	46	54	1,792
Social sciences	667	749	4,437	69	31	4,616
Agriculture and biological sciences	190	218	574	71	29	617
Engineering and applied sciences	225	216	1,160	94	6	1,109
Health professions	62	56	470	40	60	504
Mathematics and physical sciences	159	148	798	81	19	767
Unclassified	2	3	2	50	50	5
Total	2,299	2,367	12,351	64	36	12,432
Doctorate						
Education	74	98	193	71	29	205
Fine and applied arts	—	—	11	73	27	9
Humanities	43	32	291	67	33	242
Social sciences	77	98	397	75	25	403
Agriculture and biological sciences	100	87	224	86	14	210
Engineering and applied sciences	52	43	231	96	4	191
Health professions	29	34	134	68	32	137
Mathematics and physical sciences	88	99	318	90	10	334
Unclassified	4	6	4	100	—	7
Total	467	497	1,803	80	20	1,738

4.5 Diplomas and certificates awarded by Canadian universities

Level and field of study	Region and calendar year					
	Atlantic provinces		Quebec		Ontario	
	1979	1980	1979	1980	1979	1980
Undergraduate						
Education	82	49	5,102	3,732	181	178
Fine and applied arts	27	35	39	77	103	107
Humanities	3	4	392	478	241	217
Social sciences	202	222	1,973	2,492	603	731
Agriculture and biological sciences	1	1	29	3	3	3
Engineering and applied sciences	209	196	43	57	373	332
Health professions	43	62	583	778	256	250
Mathematics and physical sciences	3	6	12	16	67	79
Total	570	575	8,173	7,633	1,827	1,897
Graduate						
Education	60	42	26	29	52	56
Fine and applied arts	—	—	1	—	8	3
Humanities	—	1	42	53	41	22
Social sciences	20	5	653	707	123	120
Agriculture and biological sciences	—	—	8	5	16	20
Engineering and applied sciences	—	—	7	9	3	3
Health professions	—	—	144	158	60	70
Mathematics and physical sciences	—	—	10	13	1	—
Unclassified	—	—	—	1	—	—
Total	80	48	891	975	304	294
	Western provinces		Canada			
	1979	1980	1979	1980		
				M %	F %	M % F %
Undergraduate						
Education	1,026	823	6,391	35	65	4,782 36 64
Fine and applied arts	11	12	180	23	77	231 27 73
Humanities	109	78	745	34	66	777 32 68
Social sciences	86	103	2,864	61	39	3,548 59 41
Agriculture and biological sciences	127	111	160	78	22	118 77 23
Engineering and applied sciences	4	3	629	95	5	588 92 8
Health professions	99	99	981	10	90	1,189 10 90
Mathematics and physical sciences	8	5	90	69	31	106 60 40
Total	1,470	1,234	12,040	43	57	11,339 44 56
Graduate						
Education	244	227	382	50	50	354 43 57
Fine and applied arts	—	—	9	33	67	3 67 33
Humanities	3	1	86	55	45	77 32 68
Social sciences	1	6	797	73	27	838 73 27
Agriculture and biological sciences	2	8	26	69	31	33 64 36
Engineering and applied sciences	5	4	15	100	—	16 94 33
Health professions	—	15	204	65	35	243 65 35
Mathematics and physical sciences	1	10	12	100	—	23 87 13
Unclassified	—	33	—	—	—	34 65 35
Total	256	304	1,531	65	35	1,621 63 37

### 4.6 Bachelors' and first professional degrees awarded by Canadian universities

Specialization	Province and calendar year											
	Nfld.		PEI		NS		NB		Que.		Ont.	
	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980	1979	1980
Agriculture and biological sciences	78	80	29	38	377	374	155	129	1,130	1,122 <sup>f</sup>	2,149	2,027
Agriculture	—	—	—	—	—	—	—	—	204	246	274	251
Biology	64	65	20	22	285	291	134	110	650	592 <sup>f</sup>	1,102	989
Household science	—	—	9	16	84	77	14	8	56	79	426	426
Veterinary medicine	—	—	—	—	—	—	—	—	65	68	111	127
Zoology	—	—	—	—	—	—	—	—	1	2	79	85
Other	14	15	—	—	8	6	7	11	154	135	157	149
Education	546	546	49	65	814	738	1,077	901	4,575	4,615	5,574	4,845
Education	499	519	49	65	646	575	980	834	3,937	3,946	4,266	3,588
Physical education	47	27	—	—	168	163	97	67	638	669	1,308	1,257
Engineering and applied sciences	54	58	—	—	258	341	233	274	1,849	2,140	2,791	3,011
Architecture	—	—	—	—	31	35	—	—	212	248	251	250
Engineering	54	58	—	—	227	306	164	215	1,506	1,739	2,409	2,644
Forestry	—	—	—	—	—	—	69	59	131	153	131	117
Other	—	—	—	—	—	—	—	—	—	—	—	—
Fine and applied arts	5	4	4	6	110	112	42	39	648	804	1,155	1,147
Health professions	162	144	—	—	300	291	102	83	1,818	1,722	1,782	1,807
Dental studies and research	—	—	—	—	24	25	—	—	146	141	175	191
Medical studies and research	117	111	—	—	87	90	—	—	907	888	662	629
Nursing	45	33	—	—	112	85	102	83	251	250	483	511
Pharmacy	—	—	—	—	52	60	—	—	169	192	157	157
Rehabilitation medicine	—	—	—	—	25	31	—	—	300	251	245	252
Other	—	—	—	—	—	—	—	—	45	—	60	67
Humanities	195	176	60	73	408	474	283	242	1,968	2,276	4,875	4,571
History	51	40	27	38	126	119	107	85	374	413	1,185	1,014
Languages	125	121	25	29	227	288	150	135	918	1,049	2,411	2,252
Other	19	15	8	6	55	67	26	22	676	814	1,279	1,305
Mathematics and physical sciences	87	81	17	13	263	297	121	102	786	980	1,961	1,908
Chemistry	11	6	1	3	65	79	34	25	168	194	294	299
Geology	13	17	—	—	33	52	16	16	80	80	170	158
Mathematics	53	53	11	7	146	149	61	49	433	578	1,361	1,307
Physics	10	5	5	3	19	17	10	12	100	125	131	138
Other	—	—	—	—	—	—	—	—	5	3	5	6
Social sciences	270	276	134	159	1,364	1,216	651	656	6,924	7,453	11,933	11,647
Commerce	78	85	65	83	623	352	289	281	3,029	3,435	2,216	2,604
Economics	24	29	6	3	47	49	31	64	398	403	1,496	1,425
Geography	42	51	—	—	13	25	14	12	390	378	1,074	991
Law	—	—	—	—	158	141	72	77	809	866	1,203	1,219
Political sciences	23	21	7	7	103	111	31	33	442	497	937	887
Psychology	35	29	43	53	183	183	105	81	731	745	2,387	2,098
Social work	43	28	—	—	2	18	31	33	377	357	327	352
Sociology	19	25	12	10	120	135	60	59	480	480	1,345	1,110
Other	6	8	1	3	115 <sup>f</sup>	202	18	16	268 <sup>f</sup>	292	948 <sup>f</sup>	961
No specialization	—	—	—	—	347	237	63	88	509	615	5,521	5,270
Total	1,397	1,365	293	354	4,241	4,080	2,727	2,514	20,207	21,727	37,741	36,233

4.6 Bachelors' and first professional degrees awarded by Canadian universities (concluded)

Specialization	Province and calendar year													
	Man.		Sask.		Alta.		BC		Canada					
	1979	1980	1979	1980	1979	1980	1979	1980	1979		1980		M %	F %
Agriculture and biological sciences	374	337	289	302	386	382	626	667	5,593	51	49	5,458	50	50
Agriculture	102	104	84	79	111	118	85	82	860	63	37	880	66	34
Biology	106	83	93	87	82	106	212	319	2,748	57	43	2,664	55	45
Household science	77	65	33	49	80	83	71	85	850	4	96	888	4	96
Veterinary medicine	—	—	61	61	—	—	—	—	237	64	36	256	61	39
Zoology	82	70	—	—	75	29	76	93	313	59	41	279	58	42
Other	7	15	18	26	38	46	182	88	585	63	37	491	63	37
Education	1,085	931	1,014	1,039	2,354	2,097	1,162	1,124	18,250	33	67	16,901	31	69
Education	1,006	839	917	945	2,084	1,846	929	895	15,313	30	70	14,052	28	72
Physical education	79	92	97	94	270	251	233	229	2,937	51	49	2,849	49	51
Engineering and applied sciences	301	298	247	243	574	532	399	400	6,706	93	7	7,297	92	8
Architecture	74	50	—	—	—	—	47	49	615	77	23	632	77	23
Engineering	227	248	247	243	530	485	262	276	5,626	95	5	6,214	94	6
Forestry	—	—	—	—	44	47	90	75	465	88	12	451	87	13
Other	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Fine and applied arts	168	164	63	66	138	124	239	204	2,572	37	63	2,670	35	65
Health professions	272	334	243	253	674	702	399	423	5,752	41	59	5,759	41	59
Dental studies and research	27	33	13	20	47	45	41	36	473	84	16	491	83	17
Medical studies and research	95	109	65	60	271	253	80	92	2,284	67	33	2,232	66	34
Nursing	60	68	92	101	148	181	147	162	1,440	3	97	1,474	5	95
Pharmacy	33	51	58	51	88	73	87	84	644	40	60	668	40	60
Rehabilitation medicine	57	73	15	21	103	132	44	49	789	10	90	809	9	91
Other	—	—	—	—	17	18	—	—	122	52	48	85	58	42
Humanities	500	460	274	288	180	187	729	735	9,472	41	59	9,482	40	60
History	181	169	85	79	62	52	206	193	2,404	55	45	2,202	54	46
Languages	191	195	130	111	71	90	431	457	4,679	26	74	4,727	26	74
Other	128	96	59	98	47	45	92	82	2,389	55	45	2,553	54	46
Mathematics and physical sciences	272	237	200	188	293	270	292	293	4,292	72	28	4,369	72	28
Chemistry	53	49	32	35	26	18	46	50	730	69	31	758	69	31
Geology	34	22	20	21	90	82	22	26	478	79	21	474	78	22
Mathematics	169	143	135	119	152	148	151	155	2,672	69	31	2,708	68	32
Physics	16	23	13	13	25	22	73	62	402	90	10	420	89	11
Other	—	—	—	—	—	—	—	—	10	80	20	9	78	22
Social sciences	1,402	1,356	860	893	1,506	1,330	1,861	2,059	26,905	58	42	27,045	57	43
Commerce	302	304	346 <sup>r</sup>	345	715 <sup>r</sup>	627	483	582	8,146	75	25	8,698	72	28
Economics	172	161	90	84	102	62	149	164	2,515	78	22	2,444	75	25
Geography	163	135	37	30	77	59	184	196	1,994	65	35	1,877	63	37
Law	133	116	91	104	203	205	279	289	2,948	68	32	3,017	65	35
Political sciences	88	82	33	43	67	79	127	136	1,858	67	33	1,896	65	35
Psychology	265	270	126	155	143	117	302	336	4,320	31	69	4,067	31	69
Social work	58	81	33	39	109	109	106	114	1,086	25	75	1,131	25	75
Sociology	131	128	86	62	47	39	158	137	2,458	33	67	2,185	34	66
Other	90	79	18 <sup>r</sup>	31	43 <sup>r</sup>	33	73	105	1,580	40	60	1,730	41	59
No specialization	63	100	2	3	1,004	1,024	79	92	7,588	44	56	7,429	43	57
Total	4,437	4,217 <sup>r</sup>	3,192	3,275	7,109	6,648	5,786	5,997	87,130	51	49	86,410	50	50

### 4.7 Sources of funds for education at all levels (million dollars)

Year	Sources of funds					
	Government			Fees	Other sources	Total
	Federal	Provincial <sup>1</sup>	Municipal			
1975-76 <sup>f</sup>	1,198.0	8,400.2	2,355.4	534.0	438.7	12,926.3
1976-77 <sup>f</sup>	1,360.7	9,835.6	2,833.6	575.4	443.9	15,049.2
1977-78 <sup>f</sup>	1,564.5	11,472.6	3,120.9	657.7	548.6	17,364.3
1978-79 <sup>f</sup>	1,637.3	12,068.7	3,478.5	700.7	570.7	18,455.9
1979-80	1,675.9	13,375.7	3,690.9	761.1	743.5	20,247.1
1980-81 <sup>p</sup>	1,896.6	15,136.8	4,113.6	863.3	869.5	22,879.8

<sup>1</sup>Includes federal transfers to provinces for postsecondary education and for minority language programs.

### 4.8 Expenditures on education by level of study (million dollars)

Year and level of study	Province and region						
	Nfld.	PEI	NS	NB	Que.	Ont.	Man.
1979-80							
Elementary and secondary	279.5	56.4	391.6	311.4	4,032.5	4,929.9	529.9
Postsecondary							
Non-university	12.0	5.6	18.7	14.8	705.4	491.7	20.5
University	82.6	12.8	160.1	98.7	1,089.0	1,427.4	161.3
Vocational and occupational training	42.7	11.4	58.6	40.4	279.0	301.6	49.0
Total	416.8	86.2	629.0	465.3	6,105.9	7,150.6	760.7
1980-81 <sup>p</sup>							
Elementary and secondary	309.7	63.3	438.8	355.3	4,840.9	5,375.1	595.6
Postsecondary							
Non-university	12.9	5.7	25.4	18.6	811.0	524.6	20.8
University	95.6	13.5	186.0	114.0	1,200.2	1,573.5	173.9
Vocational and occupational training	49.5	12.7	61.9	44.7	299.8	341.2	48.8
Total	467.7	95.2	712.1	532.6	7,151.9	7,814.4	839.1
	Sask.	Alta.	BC	YT	NWT	Overseas and undistributed	Total
1979-80							
Elementary and secondary	498.3	1,069.0	1,283.8	21.9	52.1	62.3	13,518.6
Postsecondary							
Non-university	26.6	149.9	165.4	0.2	0.5	0.2	1,611.5
University	154.3	350.5	360.7	0.8	0.9	49.4	3,948.5
Vocational and occupational training	42.7	143.4	124.5	4.4	8.8	62.0	1,168.5
Total	721.9	1,712.8	1,934.4	27.3	62.3	173.9	20,247.1
1980-81 <sup>p</sup>							
Elementary and secondary	571.0	1,192.6	1,455.3	24.6	56.2	50.3	15,328.7
Postsecondary							
Non-university	31.4	180.7	189.0	0.2	0.7	0.1	1,831.1
University	188.0	410.1	433.3	1.0	0.6	52.4	4,442.1
Vocational and occupational training	52.7	157.9	147.4	6.0	9.2	56.1	1,287.9
Total	843.1	1,941.3	2,225.0	31.8	66.7	158.9	22,879.8

4.9 Expenditures<sup>1</sup> on education by level and by source of funds (million dollars)

Year, level and source of funds	Province or region					
	Nfld.	PEI	NS	NB	Que.	Ont.
1979-80						
Level						
Elementary and secondary	279.5	56.4	391.6	311.4	4,032.5	4,929.9
Postsecondary	94.6	18.4	178.8	113.5	1,794.4	1,919.1
Vocational and occupational training	42.7	11.4	58.6	40.4	279.0	301.6
Total	416.8	86.2	629.0	465.3	6,105.9	7,150.6
Source of funds						
Federal government	40.5	11.5	63.3	50.3	390.1	466.3
Provincial governments	339.5	70.4	447.0	390.4	4,688.5	4,252.4
Municipal governments	5.8	—	66.6	0.1	577.8	1,859.1
Fees and other sources	31.0	4.3	52.1	24.5	449.5	572.8
Total	416.8	86.2	629.0	465.3	6,105.9	7,150.6
Total expenditure related to						
Personal income %	12.3	11.3	10.4	10.2	11.6	8.7
Gross National Product (Canada)						
and Gross Domestic Product (Provinces) %	11.3	11.8	10.0	8.7	9.9	7.0
Population (per capita \$)	727	701	742	664	971	841
Labour force (per capita \$)	2,013	1,628	1,787	1,662	2,122	1,667
Federal transfers to provinces included						
in contributions above for						
Minority language programs	0.6	0.4	1.8	12.9	120.4	43.1
Postsecondary education	67.2	14.4	99.3	82.1	740.1	996.1
1980-81 <sup>P</sup>						
Level						
Elementary and secondary	309.7	63.3	438.8	355.3	4,840.9	5,375.1
Postsecondary	108.5	19.2	211.4	132.6	2,011.2	2,098.1
Vocational and occupational training	49.5	12.7	61.9	44.7	299.8	341.2
Total	467.7	95.2	712.1	532.6	7,151.9	7,814.4
Source of funds						
Federal government	46.8	11.4	86.3	54.3	434.5	536.7
Provincial governments	379.3	80.0	486.9	446.0	5,665.2	4,523.8
Municipal governments	9.4	—	81.5	0.1	599.2	2,062.3
Fees and other sources	32.2	3.8	57.4	32.2	453.0	691.6
Total	467.7	95.2	712.1	532.6	7,151.9	7,814.4
Total expenditure related to						
Personal income %	12.7	10.9	10.6	10.6	12.1	8.6
Gross National Product (Canada)						
and Gross Domestic Product (Provinces) %	12.6	12.1	11.1	10.2	10.5	7.0
Population (per capita \$)	807	766	835	753	1,133	911
Labour force (per capita \$)	2,186	1,764	1,962	1,843	2,417	1,790
Federal transfers to provinces included						
in contributions above for						
Minority language programs	0.7	0.5	2.0	13.1	130.6	47.9
Postsecondary education	72.7	15.8	108.7	89.5	821.8	102.4

### 4.9 Expenditures<sup>1</sup> on education by level and by source of funds (million dollars) (concluded)

Year, level and source of funds	Province or region						
	Man.	Sask.	Alta.	BC	YT and NWT	Overseas and undis- tributed	Canada
1979-80							
Level							
Elementary and secondary	529.9	498.3	1,069.0	1,283.8	74.0	62.3	13,518.6
Postsecondary	181.8	180.9	500.4	526.1	2.4	49.6	5,560.0
Vocational and occupational training	49.0	42.7	143.4	124.5	13.2	62.0	1,168.5
Total	760.7	721.9	1,712.8	1,934.4	89.6	173.9	20,247.1
Source of funds							
Federal government	99.9	86.0	141.4	165.9	7.4	153.3	1,675.9
Provincial governments	375.5	426.6	1,132.2	1,174.6	78.6	—	13,375.7
Municipal governments	226.3	164.2	324.8	463.4	2.8	—	3,690.9
Fees and other sources	59.0	45.1	114.4	130.5	0.8	20.6	1,504.6
Total	760.7	721.9	1,712.8	1,934.4	89.6	173.9	20,247.1
Total expenditure related to							
Personal income %	9.1	9.2	8.6	7.6	15.6	...	9.6
Gross National Product (Canada)							
and Gross Domestic Product (Provinces) %	7.4	6.5	5.0	5.9	10.4	...	7.5
Population (per capita \$)	737	752	851	752	1,376	...	855
Labour force (per capita \$)	1,591	1,667	1,688	1,582	..	...	1,807
Federal transfers to provinces included							
in contributions above for							
Minority language programs	2.7	1.1	3.0	2.3	—	—	188.3
Postsecondary education	120.7	111.9	235.2	300.8	7.7	—	2,777.5
1980-81 <sup>P</sup>							
Level							
Elementary and secondary	595.6	571.0	1,192.6	1,455.3	80.8	50.3	15,328.7
Postsecondary	194.7	219.4	590.8	622.3	2.5	52.5	6,263.2
Vocational and occupational training	48.8	52.7	157.9	147.4	15.2	56.1	1,287.9
Total	839.1	843.1	1,941.3	2,225.0	98.5	158.9	22,879.8
Source of funds							
Federal government	116.9	107.6	162.6	192.7	9.7	137.1	1,896.6
Provincial governments	403.5	482.3	1,278.7	1,306.3	84.8	—	15,136.8
Municipal governments	258.8	190.7	386.2	522.3	3.1	—	4,113.6
Fees and other sources	59.9	62.5	113.8	203.7	0.9	21.8	1,732.8
Total	839.1	843.1	1,941.3	2,225.0	98.5	158.9	22,879.8
Total expenditure related to							
Personal income %	9.2	9.6	8.4	7.6	14.8	...	9.6
Gross National Product (Canada)							
and Gross Domestic Product (Provinces) %	7.6	6.5	4.8	6.1	10.7	...	7.7
Population (per capita \$)	815	868	932	842	1,526	...	956
Labour force (per capita \$)	1,727	1,903	1,811	1,741	..	...	1,986
Federal transfers to provinces included							
in contributions above for							
Minority language programs	3.3	1.2	3.5	3.4	—	—	208.2
Postsecondary education	131.8	123.6	298.8	348.4	9.0	—	3,122.5

<sup>1</sup>Includes operating, capital, student aid and all departmental expenditures.

## 4.10 Expenditures on elementary-secondary education (million dollars)

Year, level and source of funds	Province or region					
	Nfld.	PEI	NS	NB	Que.	Ont.
1979-80						
Type of education						
School boards and public schools						
Teachers, salaries, including fringe benefits	162.5	28.6	225.2	156.6	1,946.5	2,609.7
Other operating expenses	49.4	13.3	89.1	65.0	1,095.9	1,111.9
Capital and debt charges	29.0	4.3	28.5	1.7	267.3	284.6
Total	240.9	46.2	342.8	223.3	3,309.7	4,006.2
Governmental expenditures on behalf of public schools	32.8	9.4	39.3	76.2	436.4	729.9
Total	273.7	55.6	382.1	299.5	3,746.1	4,736.1
Indian and Inuit schools	—	0.4	2.5	2.5	19.1	23.4
Special education	1	1	1	7.1	30.8	30.8
Private schools	1	1	1	2.3	236.5	139.6
Total	279.4	56.4	391.6	311.4	4,032.5	4,929.9
Source of funds						
Federal government	1.2	3.6	7.1	6.2	55.3	47.8
Provincial governments	251.3	52.3	310.8	301.2	3,212.6	2,821.5
Municipal governments	5.8	—	66.6	—	577.8	1,858.4
Fees and other sources	21.1	0.5	7.1	4.0	186.8	202.2
Total	279.4	56.4	391.6	311.4	4,032.5	4,929.9
Federal transfers to provinces for minority language programs	0.6	0.4	1.7	10.5	87.9	39.0
1980-81 <sup>P</sup>						
Type of education						
School boards and public schools						
Teachers, salaries, including fringe benefits	181.6	31.1	253.3	180.0	2,024.8	2,756.7
Other operating expenses	56.0	15.6	97.2	72.1	1,140.0	1,320.1
Capital and debt charges	33.2	5.3	32.0	1.8	275.0	359.8
Total	270.8	52.0	382.5	253.9	3,439.8	4,436.6
Governmental expenditures on behalf of public schools	32.8	10.4	44.5	86.3	1,093.5	696.7
Total	303.6	62.4	427.0	340.2	4,533.3	5,133.3
Indian and Inuit schools	—	0.2	4.0	3.5	23.1	33.2
Special education	1	1	1	8.6	30.0	34.4
Private schools	1	1	1	3.0	254.6	174.2
Total	309.7	63.2	438.8	355.3	4,841.0	5,375.1
Source of funds						
Federal government	0.8	2.8	9.1	7.6	76.5	65.7
Provincial governments	278.2	59.6	339.0	343.1	3,978.7	3,010.5
Municipal governments	9.4	—	81.5	—	599.1	2,061.9
Fees and other sources	21.3	0.8	9.2	4.6	186.7	237.0
Total	309.7	63.2	438.8	355.3	4,841.0	5,375.1
Federal transfers to provinces for minority language programs	0.7	0.5	1.9	12.7	94.3	43.3

#### 4.10 Expenditures on elementary-secondary education (million dollars) (concluded)

Year, level and source of funds	Province or region						
	Man.	Sask.	Alta.	BC	YT and NWT	Overseas and undistributed	Canada
1979-80							
Type of education							
School boards and public schools							
Teachers, salaries, including fringe benefits	255.9	262.4	579.4	728.2	32.3	—	6,987.3
Other operating expenses	137.0	125.5	281.1	298.9	16.9	—	3,284.0
Capital and debt charges	47.9	26.3	87.1	115.3	12.6	—	904.6
Total	440.8	414.2	947.6	1,142.4	61.8	—	11,175.9
Governmental expenditures on behalf of public schools	44.5	45.7	79.0	80.4	11.1	55.4	1,640.1
Total	485.3	459.9	1,026.6	1,222.8	72.9	55.4	12,816.0
Indian and Inuit schools	25.8	29.2	18.1	16.0	1.1	6.9	145.0
Special education	7.7	2.7	11.6	5.1	—	—	105.1
Private schools	11.1	6.6	12.7	39.9	—	—	452.5
Total	529.9	498.4	1,069.0	1,283.8	74.0	62.3	13,518.6
Source of funds							
Federal government	40.2	41.2	41.7	45.6	1.5	62.3	353.7
Provincial governments	237.0	280.3	664.1	726.8	69.3	—	8,927.2
Municipal governments	226.2	164.3	324.6	463.2	2.8	—	3,689.7
Fees and other sources	26.5	12.6	38.6	48.2	0.4	—	548.0
Total	529.9	498.4	1,069.0	1,283.8	74.0	62.3	13,518.6
Federal transfers to provinces for minority language programs	2.5	1.0	2.9	2.4	—	—	148.9
1980-81 <sup>1</sup>							
Type of education							
School boards and public schools							
Teachers, salaries, including fringe benefits	284.6	272.6	651.3	766.6	37.6	—	7,440.2
Other operating expenses	157.1	151.0	305.9	387.1	19.5	—	3,721.6
Capital and debt charges	42.0	32.7	92.3	127.9	15.9	—	1,017.9
Total	483.7	456.3	1,049.5	1,281.6	73.0	—	12,179.7
Governmental expenditures on behalf of public schools	50.4	64.1	92.3	103.2	6.0	49.7	2,329.9
Total	534.1	520.4	1,141.8	1,384.8	79.0	49.7	14,509.6
Indian and Inuit schools	38.0	39.4	21.6	18.8	1.8	0.6	184.2
Special education	10.7	3.6	14.3	5.2	—	—	117.1
Private schools	12.8	7.6	14.9	46.5	—	—	517.8
Total	595.6	571.0	1,192.6	1,455.3	80.8	50.3	15,328.7
Source of funds							
Federal government	56.4	53.8	48.8	51.1	2.2	50.3	425.1
Provincial governments	256.2	314.6	726.8	811.6	74.9	—	10,193.2
Municipal governments	258.8	190.7	386.1	522.3	3.1	—	4,112.9
Fees and other sources	24.2	11.9	30.9	70.3	0.6	—	597.5
Total	595.6	571.0	1,192.6	1,455.3	80.8	50.3	15,328.7
Federal transfers to provinces for minority language programs	3.1	1.1	3.4	3.4	—	—	164.4

<sup>1</sup>Confidential.

## 4.11 Expenditures on vocational and occupational training (million dollars)

Year and type of training	Province or region						
	Nfld.	PEI	NS	NB	Que.	Ont.	
1979-80							
Manpower training <sup>1</sup>							
Federal government	25.9	6.8	29.5	29.7	193.6	213.6	
Provincial and municipal governments	13.7	3.8	21.9	5.3	38.8	20.7	
Fees and other sources	1.1	—	0.6	0.1	5.3	3.4	
Total	40.7	10.6	52.0	35.1	237.7	237.7	
Language training, employees	—	—	2.2	1.9	21.2	13.7	
Language training, citizens	—	—	—	—	0.6	1.1	
Other training programs <sup>2</sup>	2.0	0.8	4.3	3.4	19.5	49.1	
Total	42.7	11.4	58.5	40.4	279.0	301.6	
1980-81 <sup>P</sup>							
Manpower training <sup>1</sup>							
Federal government	27.6	7.6	32.6	31.6	218.0	244.3	
Provincial and municipal governments	18.8	4.4	21.3	7.2	33.6	20.8	
Fees and other sources	1.2	—	0.6	0.6	5.6	4.0	
Total	47.6	12.0	54.5	39.4	257.2	269.1	
Language training, employees	—	—	2.8	0.7	23.2	10.7	
Language training, citizens	—	—	—	—	0.8	—	
Other training programs <sup>2</sup>	1.9	0.8	4.7	4.5	18.6	61.3	
Total	49.5	12.8	62.0	44.6	299.8	341.1	
	Man.	Sask.	Alta.	BC	YT and NWT	Overseas and undistributed	Canada
1979-80							
Manpower training <sup>1</sup>							
Federal government	30.3	24.4	61.6	69.1	5.2	—	689.7
Provincial and municipal governments	6.8	8.5	58.5	42.3	5.5	—	225.8
Fees and other sources	1.6	0.4	4.0	2.7	0.4	—	19.6
Total	38.7	33.3	124.1	114.1	11.1	—	935.1
Language training, employees	1.3	—	0.8	1.2	—	27.1	69.4
Language training, citizens	—	—	0.5	—	—	—	2.2
Other training programs <sup>2</sup>	9.0	9.5	18.0	9.2	2.1	34.9	161.8
Total	49.0	42.8	143.4	124.5	13.2	62.0	1,168.5
1980-81 <sup>P</sup>							
Manpower training <sup>1</sup>							
Federal government	32.6	30.9	72.0	86.5	6.6	—	790.3
Provincial and municipal governments	8.9	9.2	66.5	49.6	6.0	—	246.3
Fees and other sources	1.8	0.6	5.0	3.0	0.3	—	22.7
Total	43.3	40.7	143.5	139.1	12.9	—	1,059.3
Language training, employees	0.5	0.1	1.2	0.3	—	27.0	66.5
Language training, citizens	—	0.1	0.8	—	—	—	1.7
Other training programs <sup>2</sup>	5.0	11.8	12.4	8.0	2.3	29.1	160.4
Total	48.8	52.7	157.9	147.4	15.2	56.1	1,287.9

<sup>1</sup>Includes training courses purchased by the federal government, capital expenditures, grants for training in industry and allowances to trainees.

<sup>2</sup>Includes nursing assistants, training, trades training in reform schools and in penitentiaries and other training programs within federal and provincial departments, as well as private trades schools.

**4.12 Expenditures on postsecondary education (million dollars)**

Year and type of expenditure	Province or region					
	Nfld.	PEI	NS	NB	Que.	Ont.
1979-80						
Type of expenditure						
Operating						
Community colleges	11.1	5.0	13.9	13.1	586.9	390.0
Universities	71.5	8.5	132.9	84.2	894.4	1,198.8
Total	82.6	13.5	146.8	97.3	1,481.3	1,588.8
Capital	1.2	1.3	22.3	5.0	146.1	52.3
Student aid						
Scholarships and awards	4.9	0.8	8.4	4.7	102.7	114.1
Cost of loans (excluding loans)	1.4	0.3	4.0	2.3	22.2	24.0
CIDA	—	—	—	—	—	—
Total	6.3	1.1	12.4	7.0	124.9	138.1
Other direct departmental expenditures	4.5	2.6	- 2.7	4.2	42.1	139.9
Total	94.6	18.5	178.8	113.5	1,794.4	1,919.1
Source of funds						
Federal government	12.4	1.0	22.7	11.3	112.9	164.0
Provincial governments	73.4	13.7	112.8	83.0	1,429.9	1,398.7
Municipal governments	—	—	—	—	0.1	0.6
Fees and other sources	8.8	3.8	43.3	19.2	251.5	355.8
Total	94.6	18.5	178.8	113.5	1,794.4	1,919.1
Federal transfers to provinces included in provincial contributions for Postsecondary education Minority language programs	67.2 —	14.4 —	99.3 0.1	82.1 2.3	740.1 32.5	996.0 4.1
1980-81 <sup>P</sup>						
Type of expenditure						
Operating						
Community colleges	12.1	5.1	15.2	15.3	670.8	426.7
Universities	83.7	9.3	158.1	98.8	1,008.5	1,325.7
Total	95.8	14.4	173.3	114.1	1,679.3	1,752.4
Capital	0.5	0.9	28.2	3.4	136.4	77.7
Student aid						
Scholarships and awards	6.0	0.8	10.5	7.0	142.8	123.5
Cost of loans (excluding loans)	1.3	0.2	3.2	1.9	17.8	21.5
CIDA	—	—	—	—	—	—
Total	7.3	1.0	13.7	8.9	160.6	145.0
Other direct departmental expenditures	4.9	3.0	- 3.9	6.2	34.9	122.9
Total	108.5	19.3	211.3	132.6	2,011.2	2,098.0
Source of funds						
Federal government	17.5	0.9	40.0	12.4	112.0	186.2
Provincial governments	81.3	15.4	124.9	94.5	1,644.6	1,473.2
Municipal governments	—	—	—	—	0.1	0.4
Fees and other sources	9.7	3.0	46.4	25.7	254.5	438.2
Total	108.5	19.3	211.3	132.6	2,011.2	2,098.0
Federal transfers to provinces included in provincial contributions for Postsecondary education Minority language programs	72.7 —	15.8 —	108.7 0.2	89.5 2.4	821.8 36.3	102.4 4.6

## 4.12 Expenditures on postsecondary education (million dollars) (concluded)

Year and type of expenditure	Province or region						
	Man.	Sask.	Alta.	BC	YT and NWT	Overseas and undistributed	Canada
1979-80							
Type of expenditure							
Operating							
Community colleges	15.1	22.7	106.2	141.1	—	—	1,305.1
Universities	138.7	125.7	279.5	308.7	—	—	3,242.9
Total	153.8	148.4	385.7	449.8	—	—	4,548.0
Capital	9.1	20.1	86.4	42.9	—	—	386.7
Student aid							
Scholarships and awards	9.3	7.6	12.1	17.4	2.0	10.6	294.6
Cost of loans (excluding loans)	2.0	2.3	5.2	6.0	—	1.9	71.6
CIDA	—	—	—	—	—	21.9	21.9
Total	11.3	9.9	17.3	23.4	2.0	34.4	388.1
Other direct departmental expenditures	7.6	2.5	11.0	10.0	0.4	15.1	237.2
Total	181.8	180.9	500.4	526.1	2.4	49.5	5,560.0
Source of funds							
Federal government	21.6	15.2	31.8	45.0	0.3	49.5	487.7
Provincial governments	130.6	135.4	398.0	403.0	2.1	—	4,180.6
Municipal governments	0.1	—	0.2	0.2	—	—	1.2
Fees and other sources	29.5	30.3	70.4	77.9	—	—	890.5
Total	181.8	180.9	500.4	526.1	2.4	49.5	5,560.0
Federal transfers to provinces included in provincial contributions for							
Postsecondary education	120.7	111.9	235.2	300.8	7.8	—	2,775.5
Minority language programs	0.2	..	0.1	—	—	—	39.3
1980-81 <sup>P</sup>							
Type of expenditure							
Operating							
Community colleges	15.9	27.4	124.1	162.0	—	—	1,474.6
Universities	154.8	157.6	320.8	356.4	—	—	3,673.7
Total	170.7	185.0	444.9	518.4	—	—	5,148.3
Capital	5.3	21.6	112.2	71.4	—	—	457.6
Student aid							
Scholarships and awards	8.9	8.4	16.6	18.5	2.2	12.9	358.1
Cost of loans (excluding loans)	1.5	1.9	4.4	4.6	—	1.4	59.7
CIDA	—	—	—	—	—	21.9	21.9
Total	10.4	10.3	21.0	23.1	2.2	36.2	439.7
Other direct departmental expenditures	8.4	2.5	12.7	9.4	0.2	16.3	217.5
Total	194.8	219.4	590.8	622.3	2.4	52.5	6,236.1
Source of funds							
Federal government	25.2	18.1	35.4	50.8	0.5	52.5	551.5
Provincial governments	137.1	153.1	479.1	442.9	1.9	—	4,648.0
Municipal governments	0.1	—	—	—	—	—	0.6
Fees and other sources	32.4	48.2	76.3	128.6	—	—	1,063.0
Total	194.8	219.4	590.8	622.3	2.4	52.5	6,263.1
Federal transfers to provinces included in provincial contributions for							
Postsecondary education	131.8	123.6	298.8	348.4	9.0	—	3,122.5
Minority language programs	0.2	..	0.1	—	—	—	43.8

## Source

4.1 – 4.12 Education, Culture and Tourism Division, Statistics Canada.



**CHAPTER 5**

---

**EMPLOYMENT AND  
INCOMES**



## UPDATE

---

The Canadian labour force averaged 12.2 million persons in 1983. This was about 64.4% of the population 15 years of age and over (excluding inmates of institutions, full-time members of the Canadian Armed Forces, residents of Yukon and Northwest Territories and residents of Indian reserves). More than 10.7 million people were employed but an average of 1.4 million were unemployed.

Nearly 40% of all non-agricultural paid workers belonged to unions in January 1984. Wage settlements negotiated in major collective agreements continued a downward trend, falling from an average effective increase of 10.2% in 1982 to 4.9% in 1983.

The estimated 1983 average family income at \$34,479 was about the same as the 1982 average on an inflation-adjusted basis. The average income of families headed by females (mostly single-parent families) was about one-half the average received by families headed by males.

## CHAPTER 5

---

# EMPLOYMENT AND INCOMES

<b>5.1</b>	<b>Government in relation to employment</b>	<b>157</b>
5.1.1	Labour Canada	157
5.1.2	Employment and Immigration Canada	158
<b>5.2</b>	<b>Legislation and regulations</b>	<b>158</b>
5.2.1	Federal labour legislation	158
5.2.2	Provincial labour legislation	159
<b>5.3</b>	<b>Conditions of work</b>	<b>160</b>
5.3.1	Employment standards	160
5.3.2	Termination of employment	162
5.3.3	Worker compensation	163
<b>5.4</b>	<b>Organized labour</b>	<b>163</b>
5.4.1	Union membership	163
5.4.2	Collective agreements	163
5.4.3	Strikes and lockouts	165
<b>5.5</b>	<b>The labour force</b>	<b>165</b>
5.5.1	Monthly labour force surveys	165
5.5.2	Labour force census data	166
<b>5.6</b>	<b>Employment statistics</b>	<b>166</b>
5.6.1	Employment, earnings and hours	166
5.6.2	Labour income	167
5.6.3	Help-wanted index	167
5.6.4	Wages, salaries and working conditions	167
<b>5.7</b>	<b>Income maintenance</b>	<b>168</b>
5.7.1	Pension plans	168
5.7.2	Unemployment insurance	168
5.7.3	Compensation payments	168
<b>5.8</b>	<b>Volunteer work</b>	<b>168</b>
<b>5.9</b>	<b>Family incomes</b>	<b>169</b>
5.9.1	Family and income concepts	169
5.9.2	Income trends, 1961-81	170
<b>5.10</b>	<b>Family spending</b>	<b>170</b>
5.10.1	Family (spending unit) concept	170
5.10.2	Family expenditure patterns	170

## TABLES

5.1-5.3	Labour force statistics	172
5.4, 5.5	Employment	173
5.6, 5.7	Unemployment	173
5.8, 5.9	Changes in labour force	174
5.10	Intended occupations of immigrants	174
5.11, 5.12	Union membership	175
5.13	Major wage settlements	176
5.14	Strikes and lockouts	177
5.15	Employees by industry	179
5.16-5.18	Employment indexes	179
5.19, 5.20	Earnings and hours of work	181
5.21, 5.25	Wages and salaries	181
5.22	Help-wanted index	182
5.23, 5.24	Working conditions	183
5.26, 5.27	Pension plans and funds	186
5.28	Fatal injuries and illnesses	188
5.29	Compensation claims, payments	188
5.30, 5.31	Unemployment insurance	189
5.32-5.38	Family incomes and expenditures	191

## CHARTS

Chart 5.1	Minimum wages by province	161
Chart 5.2	Largest labour unions	164
Chart 5.3	Labour force, employed and unemployed	165
Chart 5.4	Unemployment insurance	169

## CHAPTER 5

# EMPLOYMENT AND INCOMES

There were about 12.2 million people in the civilian labour force in Canada in 1983. Of that number, an estimated 10.7 million persons were employed; 1.4 million or 11.9% were unemployed. The proportion of females in the labour force increased from 49.0% in 1979 to 52.6% in 1983. Of approximately 8.7 million males over 15 years of age in the population in 1979, 78.5% were in the labour force; in 1983 the participation rate was 76.7% of the estimated 9.3 million males in the population.

### 5.1 Government in relation to employment

#### 5.1.1 Labour Canada

The federal Department of Labour (Labour Canada) was established in 1900 and now operates under the authority of the Department of Labour Act (RSC 1970, c.L-2 as amended by 1980-81, c.60, June 30, 1981). The minister of labour is responsible for the Canada Labour Code, in effect since July 1971. It contains sections on labour standards, safety of employees, and industrial relations. The department administers acts covering fair wages and hours of work, and worker compensation for government employees and merchant seamen. The minister reports to Parliament on behalf of the Canada Labour Relations Board, the Merchant Seamen Compensation Board and the Canadian centre for occupational health and safety.

Concerns such as wage determination and the role of collective bargaining, job creation and job security, technological change and the changing role of women in the work force were among the labour issues earmarked for departmental attention in 1982-83.

Federal industrial relations legislation applies to employers, employees and trade unions employed on federal works and undertakings, including the interprovincial and international railways; highway transport; telephone, telegraph, and cable systems; pipelines; canals; ferries, tunnels and bridges; shipping and shipping services; radio and television broadcasting, including cablevision; air transport; banks; grain elevators; flour and feed mills, feed warehouses, and grain seed cleaning plants; uranium mines and the employees of some Crown corporations and agencies.

The department is responsible for conciliation and arbitration procedures in industrial disputes and for processing certain complaints because of violation of legislation. It determines wage rates and hours of work for federal government contracts for construction or supplies, and promotes improved industrial relations through union-management consultation and by preventive mediation through industrial relations consultants. The department administers a program of pre-retirement benefits for workers in textile, clothing, footwear and tanning industries. It is also involved in industry and community-based assistance programs for workers of designated areas and industries.

Labour Canada strives to secure a working environment conducive to physical and social well-being, a fair return for effort, and equitable access to employment opportunities. Headquarters is in Ottawa. The five regions are served by offices in Moncton, Montréal, Toronto, Winnipeg and Vancouver and district offices in other cities. Programs and services to the public include enforcement and regulatory responsibilities, education, training and promotional information. The regions respond to complaints, investigate accidents, conduct technical surveys, process claims for worker compensation, provide counselling on labour-management relations, organize information seminars to explain legislation administered by the department, and sponsor conferences to further departmental goals and objectives.

The **Women's Bureau** works to improve the situation of women in the labour force. Research and policy development has focused primarily on proposed amendments to the labour code: improved provisions for maternity leave; unpaid parental and adoption leave, available to either parent; unpaid leave for either parent for child care responsibilities; a definition of sexual harassment and policies to be followed by employees to minimize sexual harassment in the workplace — so that it may be recognized not only as a human rights issue, but as an employment problem. The bureau sponsored and participated in employment and labour related conferences, seminars and intergovernmental and international forums affecting women in the world of paid work. The bureau organized Canada's first conference on the effects of micro-technology on the

work environment identifying areas which might primarily affect women. It published information on subjects directly relevant to the female labour force.

In 1982-83 two commissions of inquiry were set up on the recommendation of the women's bureau: a task force on micro-electronics and employment and a commission of inquiry into part-time work. During 1981 an average of 1.5 million people, mostly women, worked part-time but more than 2.4 million held part-time jobs at some time during that year.

### 5.1.2 Employment and Immigration Canada

The main objective of the Canada Employment and Immigration Commission (CEIC) is to further the attainment of national economic and social goals by realizing the full productive potential of human resources, while supporting initiatives of individuals to meet their economic needs and pursue satisfactory work. CEIC also administers unemployment insurance, admission of immigrants and the social insurance number program. The commission's activities are carried out in more than 400 employment centres and 109 immigration centres in 10 regions.

**The labour market group** provides programs and services administered through Canada employment centres. Major objectives are: to provide a placement service for workers and employers; to advise workers or refer them to training programs; and to help employers recruit qualified workers and plan the long-term work force by providing information on occupations and the labour market. The group counsels workers, newcomers to the labour market and students seeking summer employment. Training programs help workers upgrade themselves through courses purchased from provincial or private schools or obtained through contracts with employers. The participants receive a salary, a training allowance or unemployment insurance benefits.

A manpower consultative service assists industries that must reorganize their work force because of technological change. A manpower mobility program helps workers move to areas where jobs are available.

**The immigration sector** is responsible for selection and reception of immigrants who will be able to establish themselves economically, culturally and socially. They include people whose skills are required by the Canadian economy, relatives of Canadian residents and refugees. The immigration sector is also responsible for the entry of visitors and for enforcement and control measures to prevent admission of undesirable persons. (See also Chapter 2 Demography, section 2.8.1 Immigration.)

All visitors entering Canada to take temporary work must have an employment authorization from a Canadian immigration office outside the country.

The applicant must have a job offer from a Canadian employer, certified by a Canada employment centre. This regulation protects the labour force against unwarranted use of foreign labour.

**The unemployment insurance program (UI)** is administered by the Canada Employment and Immigration Commission (CEIC). The commission has representation from labour, management and government, the three partners in financing the UI program. Funded by employers and employees, the UI premium account pays for 80% of program costs. Government general revenue pays for the balance.

**The social insurance number (SIN)** originated in 1964 as a file identifier for the Canada Pension Plan. Every worker must have a social insurance number. The CEIC issues and monitors SIN cards through its central index.

The social insurance number is used as an account number for government administration and on company payrolls. Applicants must provide proof of their identity and their status under the law governing citizens and immigrants. They apply for social insurance numbers through the mail directly to the central index or to local offices of the commission across Canada.

## 5.2 Legislation and regulations

The Canada Labour Code (RSC 1970, c.L-1 as amended), which consolidates previous legislation regulating employment practices and labour standards, applies only to federal undertakings and any other operations that Parliament declares to be for the general advantage of Canada or two or more provinces.

Because it imposes conditions on the rights of the employer and employee to enter into an employment contract, labour legislation is, generally speaking, law in relation to civil rights, and provincial legislatures are authorized to make laws in relation both to local works and to property and civil rights. Power to enact labour legislation has therefore become largely a provincial prerogative; a large body of legislation has been enacted affecting working hours, minimum wages, physical conditions of workplaces, apprenticeship and training, wage payment and wage collection, labour-management relations and worker compensation.

### 5.2.1 Federal labour legislation

**Industrial relations.** The federal mediation and conciliation service (FMCS) of Labour Canada administers the industrial relations provisions of the Canada Labour Code. It is responsible for the prevention or settlement of collective bargaining

disputes and other types of industrial relations problems in industries and undertakings under federal jurisdiction.

The labour code provides that parties to a collective bargaining dispute must complete a conciliation process to obtain the legal right to strike or lockout. The mediation and conciliation branch usually appoints a conciliation officer, conciliation commissioner, or conciliation board to direct discussions. The minister has the authority to appoint industrial inquiry commissions to investigate and make recommendations on labour relations problems affecting an industry or a specific collective bargaining relationship.

If a dispute is not resolved in the first stages, the minister may appoint a mediator, hoping to avert or resolve a strike or lockout. Both conciliation and mediation efforts rely on persuasion and exploration of available alternatives to assist the parties to resolve their differences. The process differs from arbitration in which a third party makes a binding decision. The mediation and conciliation branch also investigates, on the minister's behalf, requests for consent to refer bargaining related complaints to the Canadian Labour Relations Board.

The Canada Labour Relations Board determines applications for certification of trade unions as bargaining agents, and deals with applications to replace existing bargaining agents in merger or amalgamation of unions or sale of business. It decides on applications for the termination of bargaining rights based on employee wishes or where bargaining rights were allegedly obtained by fraud. It hears and determines complaints of unfair labour practice against employers, trade unions, or individuals, ordering reinstatement, compensation, or other relief where appropriate. It deals with applications relating to technological change with power to order stay of implementation and opening of negotiations. Where cases are referred by the labour minister, the board may impose the provisions for a first collective agreement. The board processes applications alleging unlawful strike or lockout, has authority to issue cease and desist orders, and can order employees back to work. The board supervises union hiring hall rules and requires trade unions and employer organizations to provide annual financial statements to their members. On the application of a trade union it may order an employer or proprietor to grant union representatives access to employees in remote areas. The board deals with appeals against the decision of a safety officer in situations where imminent danger is alleged and determines complaints alleging that employees have been penalized for exercising rights.

**Labour standards.** The code sets minimum standards of employment for employers and employees in industries under the legislative authority of Parliament.

**Occupational safety and health.** Part IV of the labour code, promulgated in 1968 and amended in 1978, was the first general legislation passed by Parliament to deal exclusively with occupational safety and health. It obliges employers and employees to perform their duties in a safe manner, authorizes regulations to deal with safety and health problems, and provides authority for the establishment of joint labour-management safety and health committees with specific powers. It gives workers the right to refuse to work where their health or safety could be endangered and provides for research into causes and prevention of accidents and for an extended safety education program. Federal public service employees are given similar protection under Treasury Board policy and occupational safety and health standards.

Regulations govern coal mine safety, elevating devices, first aid, machine-guarding, noise control, hand tools, fire safety, temporary work structures, confined spaces, safe illumination, boilers and pressure vessels, building safety, dangerous substances, electrical safety, materials handling, protective clothing and equipment, sanitation, hours of service in the motor transport industry, occupational safety and health in the uranium mining industry, safety and health committees and accident investigation and reporting.

### 5.2.2 Provincial labour legislation

**Industrial relations.** All provinces have legislation similar to the federal code designed to establish harmonious relations between employers and employees and facilitate settlement of industrial disputes. These laws guarantee freedom of association and the right to organize, provide for labour relations boards or other administrative bodies to certify trade unions as bargaining agents, and require an employer to bargain with the certified union representing his employees. In some jurisdictions, legislation requires that parties comply with conciliation or mediation procedures before a strike or lockout may legally take place. Every collective agreement must provide for settlement, without work stoppage, of disputes arising out of its interpretation or application. Strikes and lockouts are prohibited during the life of a collective agreement, and unfair labour practices are prohibited. In some provinces, labour relations are regulated by separate statutes for groups such as teachers, municipal and provincial police personnel, municipal firemen, hospital workers, civil servants and employees of Crown corporations.

In Alberta, New Brunswick, Newfoundland, Nova Scotia, Ontario and Prince Edward Island, the general labour relations statutes contain special provisions pertaining to collective bargaining in the construction industry. In British Columbia, the accreditation procedure is not limited to this industry. Quebec and Saskatchewan have separate laws regulating collective bargaining in the construction industry.

## 5.3 Conditions of work

### 5.3.1 Employment standards

**Hours of work.** The labour code sets a standard workday and workweek for employees in undertakings in the federal labour jurisdiction and requires payment of an overtime rate for work done beyond the hours specified. It establishes a maximum workweek, overtime hours being restricted to eight in a week, except in special circumstances.

The number of hours that may be worked at regular rates of pay are limited to eight in a day and 40 in a week. Hours in excess of these may be worked, provided one and one-half times the regular rate is paid, up to a maximum of 48 hours a week.

Provincial and territorial governments also have legislation governing hours of work of employees under their jurisdiction.

**Minimum wage.** The labour code sets a minimum rate for employees 17 years of age and over in the federal industries. This rate may be increased by order of the Governor-in-Council. The rate for persons under 17 is established by regulation.

Employees paid on other than a time basis, such as pieceworkers and persons paid a mileage rate, must be paid the equivalent of the minimum wage.

An employer who is providing on-the-job training to increase the skill or proficiency of employees may be exempted from paying the minimum wage during all or part of the training period.

All provinces and territories have minimum wage legislation. These laws vest authority in a minimum wage board or the Lieutenant Governor-in-Council to set wages. Minimum wage orders are reviewed frequently. In most provinces such orders cover practically all employment. Except for New Brunswick, Newfoundland, Saskatchewan, and Yukon, all jurisdictions have special rates for young workers or students.

In Northwest Territories and Yukon, labour standards regulations are issued under labour standards ordinances.

**Regulation of wages and hours.** In some provinces, the general orders are supplemented by special orders, applying to a particular industry, occupation or class of workers. Quebec has four industry orders, governing the retail food trade, public works, sawmills and forest operations.

Nova Scotia has established special rates for employees in beauty parlours, logging and forest operations, and road building and heavy construction. British Columbia has a special rate for residential caretakers in apartment buildings. In Alberta a weekly rate has been set for commercial agents and sales people. In Ontario special rates apply to the construction and ambulance service industries.

In Quebec certain terms of a collective agreement, including those dealing with hours and wages, may be made binding on all employers and employees

in an industry provided the parties to the agreement represent a sufficient proportion of the industry. Approximately 60 decrees are in effect, applying to the garment trades, barbering and hairdressing, commercial establishments, garages and service stations and other industries and services. In construction, working conditions are governed by a decree under the Construction Industry Labour Relations Act.

A construction wages act in Manitoba, applying to both private and public work, sets minimum wage rates and maximum hours of work on the recommendation of a board equally representing employers and employees, with a member of the public as chairman.

**Fair wages policy.** Wages and hours on federal government construction contracts are regulated by the Fair Wages and Hours of Labour Act and its regulations. The rates are never less than the minimum hourly rate prescribed in the labour code. Wages and hours of work on contracts for equipment and supplies are regulated by order-in-council.

**Annual vacations.** In the federal jurisdiction, the labour code provides for a vacation with pay of at least two weeks for a year of employment and three weeks after six years. Vacation pay is 4% of wages for the year and 6% of annual earnings after six years of employment.

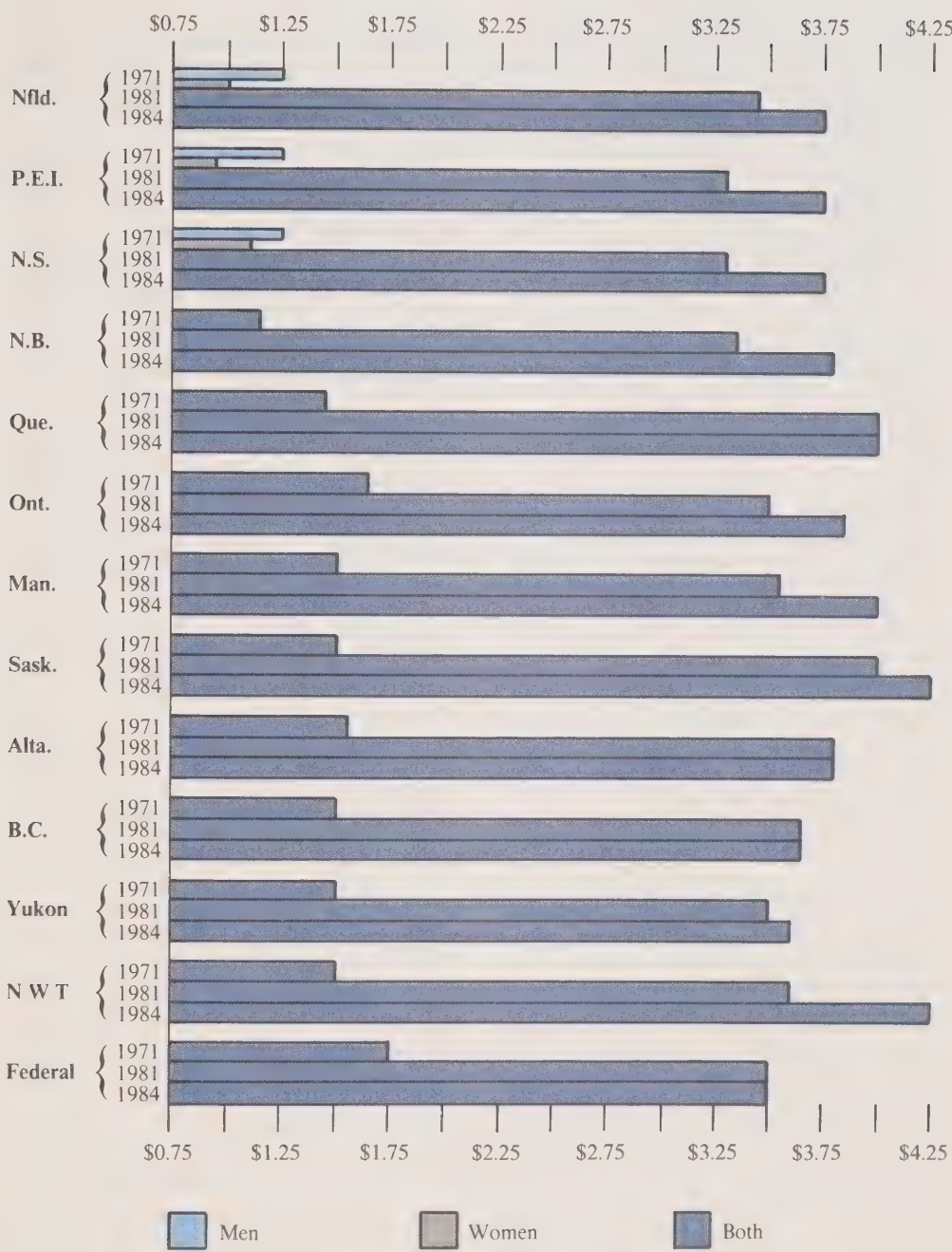
All provinces and territories have annual vacation with pay provisions. The general standard is two weeks. In British Columbia and Northwest Territories workers are entitled to three weeks after five years of service; in Manitoba, three weeks after four years; in Quebec, three weeks after 10 years; and in Saskatchewan, three weeks after one year and four weeks after 10 years.

**General holidays.** Legislation deals with paid general holidays in the federal jurisdiction, the two territories and the following provinces: Saskatchewan, Newfoundland, Quebec, Alberta, British Columbia, Manitoba, New Brunswick, Nova Scotia and Ontario. Under the federal jurisdiction there are nine paid general holidays. In the specified provinces and territories the number varies from five to nine days during the year, when workers have a general holiday with pay.

**Maternity leave.** Under federal jurisdiction, an employee who has completed 12 consecutive months with an employer is eligible to take 17 weeks of maternity leave. The period of time in which the leave may be taken begins 11 weeks before the expected date of delivery and ends 17 weeks following the actual delivery date.

Several provinces have legislation to ensure job security of women workers before and after childbirth. Alberta, Saskatchewan, British Columbia and Quebec provide for 18 weeks. Manitoba, New Brunswick, Newfoundland, Nova Scotia and Ontario

Chart 5.1  
Minimum wages per hour, selected years



Note: As of April 1984.

provide for 17 weeks. The leave may be divided into pre- and post-natal leave generally at the discretion of the employee.

Post-natal leave is compulsory, unless a medical doctor authorizes an earlier return to work. In some jurisdictions, an extension of post-natal leave is allowed where recommended in a medical certificate. In all jurisdictions, the right to maternity leave is supplemented by a guarantee that an employee will not lose a job because of absence on maternity leave.

Four provinces have legislation dealing with paternity and/or adoption leave. In Nova Scotia a female employee may be granted leave of absence up to five weeks when adopting a child five years old or younger. In Prince Edward Island a similar provision grants up to five weeks leave of absence without pay to a female employee adopting a child six years old or younger. In Quebec an employee may be absent from work without pay for two days at birth or adoption of a child. In Saskatchewan an employee who has worked continuously for at least 12 months is entitled to six weeks maximum paternity or adoption leave.

**Human rights.** Laws to ensure fair employment practices have been enacted throughout Canada. These include employment-related subjects such as membership in trade unions. All jurisdictions have augmented this legislation to form a human rights code. Northwest Territories and Yukon have enacted fair practices ordinances. Most of these codes cover employment, occupancy and property matters, and access to facilities generally available to the public.

Most jurisdictions prohibit discrimination on grounds of race, religion, national origin, colour, sex, age and marital status. In selected cases the prohibited grounds include political beliefs, ethnic origin, physical handicap, creed, source of income, ancestry, social condition, attachment or assignment of pay, and a conviction for which a pardon has been granted.

Attention is being paid by the federal government to employment of the handicapped. A special parliamentary committee on the disabled and the handicapped reported its findings in a publication, *Obstacles*, in February 1981. Guidelines have been issued for employment of the handicapped in the federal public service, federal public buildings are being renovated to facilitate access, and the federal government is urging employers in the federal sector to give equal employment opportunities to the handicapped.

Equal pay provisions exist across Canada. Criteria for determining the meaning of equal work vary from one act to another. Methods of enforcement also vary.

**Apprenticeship.** All provinces have apprenticeship laws providing for organized on-the-job training and school instruction in designated skilled trades. Statutory provision exists for issuing qualification

certificates, on application, to tradesmen in certain trades. In some provinces legislation makes it mandatory for certain classes of tradesmen to hold certificates of competency.

**Occupational safety and health.** Although both federal and provincial legislatures have the power to enact laws and regulations concerning the protection of workers against industrial accidents or diseases, the provinces have major responsibility. The federal authority is limited to industries under federal jurisdiction. Legal standards and regulations designed to ensure the safety, health and welfare of persons employed in resource, industrial and commercial establishments exist in all jurisdictions.

Safeguards for worker protection are established for fire safety, sanitation, heating, lighting, ventilation, protective equipment, materials handling, safety of tools, guarding of dangerous machinery, safe handling of explosives and protection against noise and radiation.

Other safety laws and regulations concern hazardous equipment such as boilers and pressure vessels, electrical installations and elevating devices. A growing number govern toxic substances and occupational health hazards. Still others regulate hazardous industries such as mining, construction, demolition and logging.

Safety inspection is provided for in all provinces. Penalties exist where an employer contravenes any provision of an occupational safety and health act or regulation, or fails to comply with a direction made by an inspector.

### 5.3.2 Termination of employment

**Individual termination.** In the federal jurisdiction, an employer who terminates the employment of an employee who has completed three consecutive months of employment has to give that employee two weeks notice in writing or two weeks wages at the regular rate. The code prohibits dismissal, layoff or suspension of an employee due to garnishment or notice of garnishment proceedings. Protection against dismissal is provided to an employee who is absent due to sickness for 12 weeks or for a longer period if an employee is undergoing treatment and rehabilitation at the expense of a worker compensation authority. Unorganized employees have the right to lay a complaint if they feel they have been dismissed unjustly. The case may be dealt with by adjudication if a satisfactory settlement cannot be otherwise arranged.

All provinces, except New Brunswick, also have legislation requiring an employer to give notice to an individual worker whose employment is terminated.

**Group termination of employment.** Under federal jurisdiction, an employer must give notice when he terminates the employment of 50 or more employees in one establishment within a four-week period. Length of notice varies with the size of group

terminated: 50 to 100 require eight weeks notice; 101 to 300, 12 weeks notice; and 301 or more, 16 weeks notice.

At the provincial level, five provinces require an employer to give notice of a planned termination of employment or layoff of a group of employees. In Manitoba, Newfoundland and Ontario, group notice requirements apply when an employer plans to terminate the employment of 50 or more persons within four weeks. Length of notice is related to the number of workers involved. Manitoba requirements are: 50 to 100 employees, eight weeks; 101 to 300, 12 weeks; over 300, 16 weeks. In Ontario and Newfoundland: 50 to 199 require eight weeks; 200 to 499, 12 weeks; and 500 or more, 16 weeks. In Nova Scotia, a group notice requirement applies when an employer contemplates dismissal of 10 or more employees within four weeks and in Quebec within two months. Length of notice varies with the number of workers involved: 10 to 99 require two months; 100 to 299, three months; 300 and over, four months.

### 5.3.3 Worker compensation

Federal involvement in worker compensation is limited to areas of direct federal interest which cannot be covered by provincial legislation. The Government Employees Compensation Act covers employees of the public service of Canada and several Crown corporations. The federal penitentiary inmates compensation scheme covers inmates injured during work-related activities. The Merchant Seamen Compensation Act covers seamen not covered by provincial acts.

Compensation is generally provided for personal injuries sustained at work if the worker is disabled for more than a set number of days, unless injury is due to the worker's serious and wilful misconduct. Compensation is also payable for industrial diseases arising from work.

Claims are largely administered on behalf of the federal government by the provincial worker compensation boards. Benefits are linked to rates set by individual provinces.

Various types of benefits are provided for a worker protected by compensation legislation. Benefits for disability are based on a percentage of average weekly earnings. Persons with a permanent or temporary total disability, presumed not to be able to work at all, get 75% of gross average weekly earnings (90% of net earnings in Quebec, New Brunswick and Alberta) as long as the disability lasts. Partial disablement entitles a worker to proportionate compensation. Medical and hospital benefits are also provided.

A primary objective of compensation is rehabilitation of the injured worker. Boards may adopt any means considered expedient to help get workers back to work and to lessen any handicap. In Alberta and Saskatchewan the rehabilitation services of the

boards are utilized to train dependent spouses and to help them obtain suitable employment.

When a worker dies from an industrial accident or disease, dependents are entitled to a monthly payment fixed by legislation. These pensions are paid as long as there are dependent children. Otherwise pensions are usually granted for a limited term. Where necessary, occupational training is financed for the dependent spouse. A monthly allowance is also payable for each dependent child to an age limit fixed by law or, in some jurisdictions, for the duration of a child's education. If a child's remaining parent dies, he becomes eligible for the usually higher monthly payment provided for an orphan.

## 5.4 Organized labour

### 5.4.1 Union membership

At January 1, 1983, labour unions reported a total of 3.6 million members in Canada: 40.0% of non-agricultural paid workers and 30.6% of the total civilian labour force. Canadian Labour Congress (CLC) affiliates, with 2.0 million members, accounted for 56.5% of total union membership. In CLC affiliates about 850,000 members belonged to unions that were also affiliated with the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) in the United States; 1.2 million were members of unions affiliated with the CLC but not holding affiliation with the AFL-CIO. Federations affiliated with the Quebec-based Confederation of National Trade Unions (CNTU) had 213,370 members or 6% of total union membership (Table 5.12).

International unions with headquarters in the United States accounted for 41.3% of the 1983 membership, down from 44.2% in 1982. In 1983, 16 unions reported 50,000 or more members, accounting for 50.5% of the total membership.

### 5.4.2 Collective agreements

Labour Canada publishes quarterly base rate settlement data for collective agreements. The agreements covered are limited to negotiating units of 500 or more employees in all industries except construction. The base rate for a negotiating unit is defined as the lowest rate of pay, expressed in hourly terms, for the lowest-paid classification used for qualified workers in the bargaining unit. The wage data are not necessarily representative of the average increases received by the workers in the whole negotiating unit. Nevertheless, the data are aggregated using the total number of employees in the negotiating unit.

Through 1982 a total of 497 wage settlements were reached covering more than 1.1 million employees; 386 settlements covering 804,100 employees were without a cost-of-living adjustment (COLA) clause and provided for average annual increases of 10.0%, down from 13.3% in 1981. The remaining 111 agreements for 337,300 employees had a COLA clause and made provision for increases

Chart 5.2  
Unions — the 10 largest, 1983



-1- Canadian Union of Public Employees

-2- National Union of Provincial Government Employees

-3- Public Service Alliance of Canada

-4- United Steelworkers of America

-5- United Food and Commercial Workers

-6- International Union, United Automobile Aerospace and Agricultural Implement Workers of America

-7- International Brotherhood of Teamsters Chauffeurs, Warehousemen and Helpers of America (Ind.)

-8- Quebec Teaching Congress (Ind.)

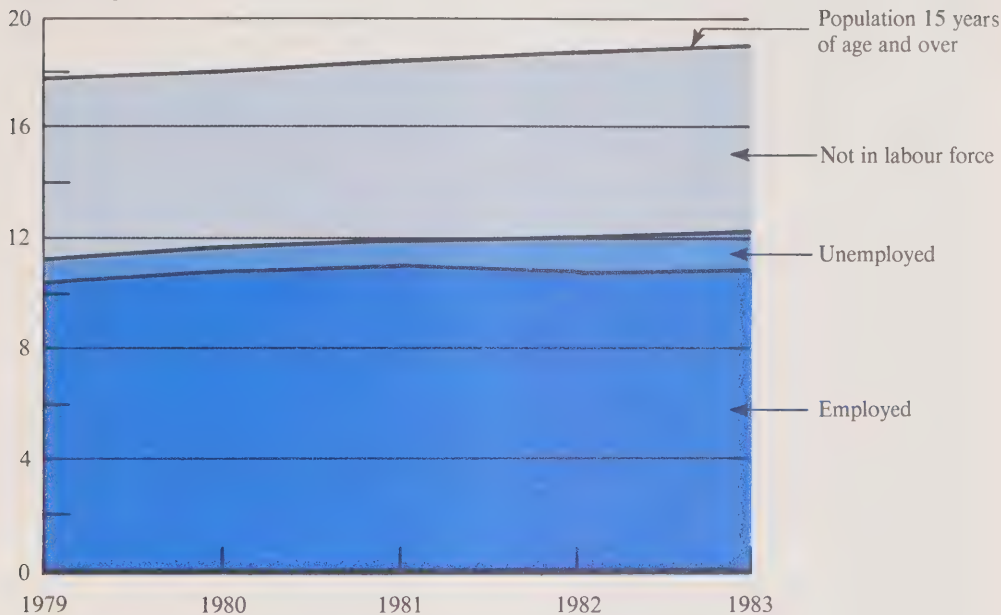
-9- United Brotherhood of Carpenters and Joiners of America

-10- Social Affairs Federation

Chart 5.3

**Estimates of the civilian labour force, employed and unemployed, 1979-83**

Millions of persons



averaging 9.0% excluding future COLA payments. The data include the effects of both federal and provincial restraint programs.

In the commercial sector, wage settlements without a COLA clause averaged 9.5% in 1982, down from 13.8% in 1981. Increases in the non-commercial sector in 1982 were 10.3% on average, down from 13.1% in 1981.

**5.4.3 Strikes and lockouts**

Statistical information on strikes and lockouts in Canada is compiled by Labour Canada on the basis of reports from employment centres, provincial labour departments and other sources. The 677 work stoppages reported in 1982 involved 444,302 workers and 5.8 million person-days lost. Corresponding figures for 1981 were 1,048 stoppages, 338,548 workers and 8.9 million person-days lost.

**Time loss**, as a percentage of total estimated working time of non-agricultural paid workers, was 0.37% in 1981 and 0.25% in 1982.

**5.5 The labour force****5.5.1 Monthly labour force surveys**

Statistics relating to employment and unemployment at national and provincial levels are provided through a Statistics Canada labour force survey, carried out monthly.

The survey sample represents all persons 15 years of age and over residing in Canada except: residents of Northwest Territories and Yukon, persons living on Indian reserves, inmates of institutions and full-time members of the armed forces. Interviews are carried out in approximately 56,000 households chosen by area sampling methods across the country. Estimates of employment, unemployment and non-labour force activity generated from the survey refer to a specific week each month, normally the week containing the 15th day. The labour force is composed of members of the civilian non-institutional population 15 years of age and over who, during reference week, were employed or unemployed.

**The employed** are defined as all persons who, in the reference week, did any work for pay or profit, either paid work in an employer-employee relationship or self-employment. Included is unpaid family work contributing to the operation of a farm, business or professional practice owned or operated by a related member of the household. It also includes persons who had jobs but were not at work due to illness or disability, personal or family responsibilities, bad weather, labour disputes or other reasons.

**The unemployed** are those who, in the reference week, were without work, had actively looked for

work in the past four weeks and were available for work; had not actively looked for work in the past four weeks but had been on layoff, with expectation of returning to work, and were available for work; or had a new job to start in four weeks or less and were available for work. Persons not in the labour force are those defined as neither employed nor unemployed.

In the period 1979-83, the Canadian labour force, including both employed and unemployed, increased by 952,000 persons or 8.5%. There was an increase of 15.0% in the number of women in the labour force and an increase in the number of men of only 4.2%. These changes resulted from an increase in the participation rate (the labour force as a percentage of the corresponding population aged 15 and over) for women from 49.0% in 1979 to 52.7% in 1983, and a small decrease for men from 78.5% to 76.7%.

Participation rates decreased for both young males, age 15-24, from 71.3% to 69.2% and for older males, 25 and over, from 81.0% to 79.1%. Women in both age groups increased their participation. The rate for women age 15-24 rose from 61.0% in 1979 to 62.8% in 1983 and for women 25 and over from 45.0% to 49.6%.

The total number of persons employed in Canada rose by 339,000 or 3.3% over the 1979-83 period. Although employment rose in most provinces the increases were not uniform, ranging from 0.9% in Quebec to 10.7% in Alberta. Other increases were 6.1% in Saskatchewan, 4.6% in British Columbia, 4.3% in Prince Edward Island, 2.9% in Nova Scotia, 2.6% in Ontario, 2.4% in Newfoundland, 2.2% in Manitoba and 1.6% in New Brunswick.

Unemployment as a percentage of the labour force varied from 7.4% in 1979 to 11.9% in 1983 with an average over the entire 1979-83 period of 9.1%. Persons aged 15-24 had considerably higher rates (15.6%) than persons 25 and over (6.9%). Although women usually had higher unemployment rates than men during this period, this trend was reversed in 1983.

### 5.5.2 Labour force census data

In the 1981 Census questions were asked of persons 15 and over relating to labour force activity. Information on labour characteristics, such as occupation and industry, was also collected. The census provides this type of information once every five years in detailed terms of geographical areas, classifications and cross-classifications.

Because of differences in coverage, methodology and reference period, census information in some ways is not comparable with that collected by the monthly labour force survey even though the fundamental concepts are the same. The smaller labour force survey sample includes persons 15 and over but excludes Yukon and Northwest Territories, Indian reserves, members of the armed forces, overseas households and inmates of institutions. The 1981 Census questions were asked of all persons 15

and over, excluding inmates of institutions, in a 20% sample of households.

**Labour force data** from the 1981 Census show that the participation rate was 64.8% in the week preceding the census taken June 3, 1981. Rates were higher than the national average in Yukon (76.3%), Alberta (71.7%), Ontario (67.1%) and British Columbia (65.4%). Newfoundland had the lowest participation rate, 57.1%. More than 60% of the labour force is concentrated in Ontario and Quebec.

**Women in the labour force.** The upward trend in labour force participation by women persisted and even accelerated from 39.9% in 1971 to 44.8% in 1976 and 52.1% in 1981. The highest rates were in Yukon (67.3%) and Alberta (58.2%), and the lowest were in Newfoundland (42.4%) and Nova Scotia (43.3%). Higher participation rates were recorded for divorced, single and married women. The rate had decreased only for widows since 1971.

**Labour force by occupation.** Canada's experienced labour force grew by 39.2% over the 1971-81 period. The occupational composition reflects a marked shift toward greater specialization in the administrative and scientific areas. Four major occupational groups made rapid gains: social sciences and related fields (138%), managerial and administrative occupations (118%), artistic, literary, recreational and related occupations (105%) and the natural sciences, engineering and mathematics (72%).

In contrast, other occupations either declined or increased only slightly since 1971, such as farming, forestry and logging, mining and quarrying including oil and gas field occupations, machining and related occupations, and materials handling and related occupations. Clerical, sales and service occupations posted growth rates similar to that of the labour force as a whole and remained the largest occupational groups numerically.

**Labour force by industry.** Between 1971 and 1981 the finance, insurance and real estate sector experienced the most striking growth in labour force (73.5%). The largest numerical increase was in community, business and personal services, with 1.4 million (40.2%) of the 3.4 million gain in persons in the labour force.

## 5.6 Employment statistics

### 5.6.1 Employment, earnings and hours

Monthly surveys of employment conducted by Statistics Canada collect employment, payroll and person-hours information. In April 1983, four of the agency's employment surveys were combined into one, a new Statistics Canada survey of employment, payrolls and hours (SEPH), reducing the response burden and streamlining the processing of data.

Tables up to and including 1982 data in this edition of the *Canada Year Book* are based on the former surveys. Average weekly earnings, average

hourly earnings, and average weekly hours are derived from this collected information. Employment indexes are based on 1961=100; the data are compiled on the 1960 Standard Industrial Classification (SIC).

Employment areas not covered are agriculture, fishing and trapping, education and related services, health and welfare services, religious organizations, public administration and defence, and private households.

**Monthly employment statistics** relate to the number of employees drawing pay in the last seven days in the month. Respondents report gross wages and salaries paid before deductions are made. Reported payrolls represent gross remuneration and paid absences, including salaries, commissions, piecework and time-work payments, and such items as shift premiums and regularly paid production, incentive and cost of living bonuses. Statistics on hours relate to regular and overtime hours of wage-earners for whom records of hours are maintained, and to hours credited to wage-earners absent on paid leave. Data were requested for all employees except homeworkers and casual employees working less than one day in the pay period. Also excluded were working owners and partners of unincorporated business and professional practices.

**Industrial employment.** Table 5.16 indicates that, over the 1979-82 period, the industrial composite index of employment (1961=100) for Canada declined by 3.1%. Among industry divisions showing losses, forestry led with a 25.9% decrease, followed by construction (12.1%), manufacturing (10.5%) and trade (2.2%). Compared with 1981, the industrial composite index for 1982 decreased by 6.1%.

**Weekly earnings in industry.** Average weekly earnings at the national industrial composite level have increased from \$288.32 in 1979 to \$390.75 in 1982. In the recent period, gains have been 11.9% in 1981 and 10.0% in 1982.

**Hourly wage rates.** The monthly survey covers statistics of hours of work and paid absence of wage-earners for whom records of hours are maintained, plus corresponding totals of gross wages paid; these wage-earners are mainly hourly-rated production workers. Information on hours is frequently not kept by employers for ancillary workers nor, in many industries and establishments, for any wage-earners. Salaried employees are excluded from the series. Thus data are available for fewer industries and workers than are covered in the statistics on employment and average weekly earnings.

During 1979-82 average weekly hours declined while average hourly earnings rose substantially, mainly because of upward wage-rate revisions in all industries. Technological changes, which often involve the employment of more highly skilled

workers at the expense of those in the lower-paid occupations, also contributed to the advance of average hourly earnings. From 1979 to 1982 average hourly earnings rose by 44.1% in mining, by 33.8% in construction and by 37.5% in manufacturing. During the same period, average weekly hours declined by 3.6% in mining, by 3.3% in construction and by 2.8% in manufacturing. Comparing 1982 to 1981, average hourly earnings increased by 8.2% in construction, by 11.6% in manufacturing and by 13.8% in mining; weekly hours decreased by 1.5% in mining, by 2.1% in manufacturing and by 2.1% in construction.

### 5.6.2 Labour income

Labour income, comprising wages and salaries and supplementary labour income, is defined as all compensation paid to employees residing in Canada and to Canadians who are employed abroad by the federal government. Not included are earnings received by self-employed persons such as independent professionals, proprietors of unincorporated businesses and farmers. Also excluded are military pay and allowances because they are shown as a separate item in the national income accounts.

Wages and salaries include director fees, bonuses, commissions, gratuities, income in kind, taxable allowances and retroactive wage payments. Wages and salaries are estimated on a gross basis, before deductions for employee contributions to income tax, unemployment insurance and pension funds. Remuneration accumulating over time, for example, retroactive payments, are accounted for in the month and year of payment.

Supplementary labour income, defined as payments made by employers for the future benefit of their employees, comprises employer contributions to employee welfare and pension funds, worker compensation funds and unemployment insurance.

### 5.6.3 Help-wanted index

This is a measure of the demand for labour insofar as help-wanted advertisements reflect requests by employers for manpower. The index is constructed by measuring the volume of columns of help-wanted advertising in the classified sections of 18 newspapers in major metropolitan areas for a specific Saturday each month. Advertisements which are labelled "careers" are not included. No attempt is made to measure the number of jobs related to the advertisements. The index is available monthly on a seasonally-adjusted basis for all of Canada and for the five regions of Canada from 1962.

### 5.6.4 Wages, salaries and working conditions

Statistics on occupational wage and salary rates by industry, locality and for all Canada, with standard weekly hours of work, are compiled and published by Labour Canada. The statistics are based on an annual survey covering some 30,000 establishments in most major industries and apply to the last normal pay period preceding October 1.

For 1978-82, Table 5.23 gives summary data on working conditions of office and non-office employees in major industries and Table 5.24 gives a summary for employees in manufacturing industries.

Table 5.25 presents average wage and salary data on October 1, 1981 and 1982. Hourly and weekly rates of pay are listed for 24 occupations; salaries are shown separately for men and for women engaged in several office occupations.

## 5.7 Income maintenance

### 5.7.1 Pension plans

**Private pension plans.** Socially and economically, one of the most significant factors is the extent of labour force participation in employer-sponsored pension plans. At the beginning of 1982 there were 15,232 private pension plans (employer-sponsored) operating in Canada, according to a pensions data bank maintained by Statistics Canada. These plans covered 4.7 million workers, an increase of 182,500 in two years (Table 5.26).

Plan members represented nearly 47% of the employed paid workers in the labour force including the armed forces. Excluded from the labour force data were unpaid family workers, the self-employed and the unemployed who by definition are not participants in employer-sponsored pension plans.

Plan sponsors included both the public and private sectors. Although there were only 729 public sector plans they accounted for 42% of all members.

Small plans tend to be funded with insurance companies. Although there were 10,623 of these plans, they covered only 13% of the members. Large plans were funded on a trustee basis. A trustee pension fund is an arrangement under which contributions to a pension plan are deposited with a trustee who is responsible for holding and investing the funds and paying the benefits in accordance with the terms of a trust agreement.

Only 28% of all plans were trustee but they covered 3.2 million members. Some of the largest were the 19 plans for federal and provincial public servants, covering 686,487 members with contributions paid into consolidated government revenue funds and not held in cash or securities.

**Other pension plans** including the old age security program, the Canada and Quebec pension plans and other income maintenance programs are described in Chapter 6, Social security.

### 5.7.2 Unemployment insurance

Unemployment insurance is a major social program which provides as much as 50 weeks of income support (benefits) to unemployed workers. Some 95% of workers are covered by UI. Self-employed workers are not covered, including people running small businesses and employers of larger enterprises.

UI benefits can be divided into two categories: regular and special benefits. Regular benefits are paid to people who are unemployed because they can't find work. Special benefits are paid to people who can't work because they're sick, injured, in quarantine or pregnant. There is also a special one-time payment to workers who reach age 65. Adoption benefits were available beginning January 1984.

The commission paid out almost \$8.6 billion in UI benefits in 1982, up from about \$4.8 billion in 1981 and nearly \$4.4 billion in 1980. The average claimants each month were over 1.1 million in 1982, up from 720,000 in 1981 and 703,000 in 1980.

Statistics Canada publishes monthly, quarterly and annual unemployment insurance statistics. The information is obtained from the employment and immigration commission. The data show, for example, the number of claims received, payments made to beneficiaries, employee contributions and the number of persons receiving benefits. Table 5.30 summarizes unemployment insurance in the years 1979-82.

### 5.7.3 Compensation payments

**Fatal occupational injuries and illnesses.** Data on fatal occupational injuries and illnesses compiled by Labour Canada are collected from provincial worker compensation boards. From 1972 to 1981, an annual average of 1,127 industrial workers sustained fatal injuries and illnesses. Of 830 fatality reports received in 1981 (excluding Quebec), collisions, derailments or wrecks caused 243 deaths; being struck by or against an object, 119; falls and slips, 69; drowning, 35; being caught in, on or between objects or vehicles, 59; occupational illnesses, 105; fire, explosion, temperature extremes, 19; and the remaining 181 resulted from miscellaneous accidents (Tables 5.28 and 5.29).

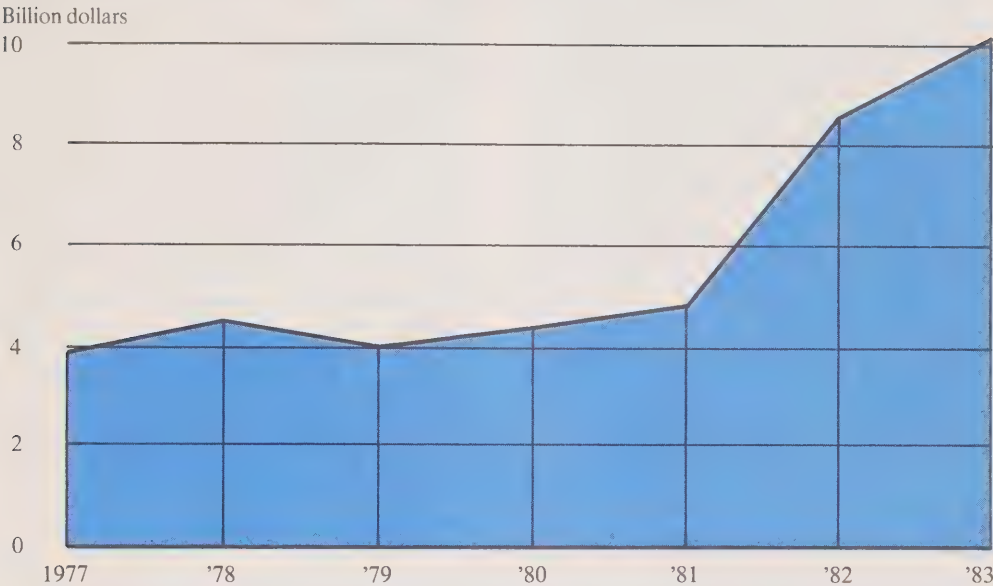
## 5.8 Volunteer work

About 15% of the adult population takes part in unpaid voluntary work in Canada, supporting such things as community projects, worthy causes and special interests. Statistics Canada added a series of questions about volunteering to the Labour Force Survey of February 1980. Initial analysis showed that 2.7 million adult Canadians worked as volunteers in the year ending February 1980. Of these 54% were female, 46% were male.

Altogether they contributed 374 million hours, equal to about 212,000 person-years of volunteer work during the year. The highest rate of volunteering was in Saskatchewan (27%), followed by Manitoba (21%), Alberta and Prince Edward Island (19%), British Columbia and Nova Scotia (17%), Newfoundland (16%), Ontario (15%), New Brunswick (14%) and Quebec (11%).

Volunteers were drawn from 18% of married people, 10% of single people and 12% of others. They

Chart 5.4  
Unemployment Insurance benefit payments



Source: *Statistical report on the operation of the Unemployment Insurance Act*. Statistics Canada 73-001.

included 16% of employed people, 15% of those not in the labour force and 10% of the unemployed. Incidence increased with educational attainment: 7% of volunteers had eight years or less of education while 28% had university degrees.

By industry, 26% of people employed in agriculture did volunteer work and 22% in public administration, ranging downward to 11% in manufacturing.

People aged 25-44 years were most likely to volunteer (20%), followed by those of 45 years and over (15%) and 15-24 (9%).

### 5.9 Family incomes

Statistics on income distribution for families and individuals are collected in Statistics Canada annual surveys of consumer finances. The survey has used a large sample (approximately 42,000 dwellings) every second year and a smaller sample (about 17,000) in intervening years. When begun in 1952, the survey was restricted to non-farm families but in 1966 coverage was extended to the farm population. The survey does not include residents of Yukon and Northwest Territories, persons living in institutions, on Indian reserves and in military camps. Provincial distributions are available from the larger surveys. A wide variety of tabulations are now published

because of computer use and the increased survey scope. Special tabulations are available on request.

#### 5.9.1 Family and income concepts

The following definitions are used in the annual survey of consumer finances.

**Family.** A group of individuals sharing a common dwelling unit and related by blood, marriage or adoption. This is often referred to as an economic family and is a broader definition than that employed by most demographic studies and the census in which a family is restricted to a married couple with or without unmarried children or a parent with unmarried children. This economic family includes all relatives in a household, regardless of the degree of relationship.

**Unattached individual.** A person living alone or in a household where he or she is not related to other household members. Unattached individuals have incomes different from those of families, particularly as large numbers are young entrants into the labour force or elderly pensioners.

**Income.** Money income received from all sources before payment of taxes and such deductions as pension contributions and insurance premiums. This income may be composed of: wages and salaries; net income of self-employment such as partnership in

unincorporated businesses, professional practice and farming, investment income including interest, dividends and rents; government transfer payments, for example old age pensions, family allowances; and such income as retirement pensions and alimony. It does not include the value of farm products produced and consumed on the farm. The survey income concept is broader than the income defined for the calculation of income tax since it includes such non-taxable money income as the Guaranteed Income Supplement and pensions to the blind.

**Low income cut-offs** are used to delineate low income family units from other family units. These cut-offs were determined separately for families of different size and living in areas of different degrees of urbanization, based on 1978 family expenditure data. Cut-offs were set at income levels where family units on average spent 58.5% or more of their income on food, shelter and clothing. The cut-offs are rebased when more recent national family expenditure data become available; between these revisions they are updated annually by the consumer price index.

### 5.9.2 Income trends, 1961-81

Tables 5.32 and 5.33 present family incomes in Canada over a period of years. Although sample coverage changed in 1966 to include farm families, this does not seriously affect the comparability of the data with earlier years. The first part of Table 5.32 shows that the average income (in current dollars) rose from \$5,317 in 1961 to \$30,440 in 1981, but these changes do not reflect the decrease in the purchasing power of the dollar. The second part of Table 5.32 and Table 5.33 take this into account and give the average income in constant 1971 dollars.

Average family income in Canada (total money income before taxes and deductions) moved over \$30,000 for the first time in 1981. Regionally, Ontario, the Prairies and British Columbia had average family incomes above the national average in 1981. Average family incomes ranged from a low of \$24,659 in the Atlantic provinces to a high of \$32,835 in British Columbia (Table 5.34).

In 1981 the average income of families with male heads was nearly \$31,884 and that of families with female heads was just over \$18,264 (Table 5.35). In the younger groups, families headed by males had more than twice the income of those headed by females.

Table 5.36 indicates the incidence of low incomes among families and unattached individuals and compares selected characteristics of families and unattached individuals with low incomes vis-à-vis those with higher incomes. In 1981 the incidence of low income among families (or the percentage of families below the low income cut-offs) was 12.0% and among unattached individuals it was 37.8%. Families with female heads, the majority of them

single parent families, constituted 33.8% of low income families. About 67% of low income unattached individuals were females.

## 5.10 Family spending

Household surveys of family spending provide consumer information that can be related to characteristics such as geographic location, family size and income level. In general, the Statistics Canada survey program has consisted of two phases: the collection, by means of monthly record-keeping surveys throughout the reference year, of detailed information on family food expenditures; and the collection of information by annual recall of all family expenditure, income and changes in assets and liabilities. The record-keeping phase was not featured in all the survey programs.

A primary use of such surveys is to provide information for constructing, reviewing and revising the weights of the consumer price index. Initially these small-scale sample expenditure surveys carried out in selected Canadian urban centres since 1953 were designed to follow changes in the patterns of a well-defined group of middle-income urban families known as the "target group" of the consumer price index. In recent years, demand for expenditure statistics to serve other needs of government, business, welfare organizations and academic research has resulted in a widening in the scope and size of the surveys.

The most recent survey, carried out in February and March 1979, refers to calendar year 1978. This survey was the first since 1969 to cover both urban and rural areas in the 10 provinces.

### 5.10.1 Family (spending unit) concept

In the family expenditure surveys the family or spending unit is defined as a group of persons dependent on a common or pooled income for major items of expense and living in the same dwelling, or one financially independent individual living alone. Never-married sons or daughters living with their parents are considered part of their parents' spending unit. In most cases the spending units of two or more are persons related by blood, marriage or adoption, and are thus consistent with the economic family definition used in surveys of family income. However, according to this definition, unrelated persons living in the same household would be counted as unattached individuals. Under expenditure survey definitions two or more unrelated persons may comprise one family or spending unit.

### 5.10.2 Family expenditure patterns

Income is the most influential of all factors bearing on most items of family spending.

**Expenditure trends, 1969-78.** Average income of survey families of two or more persons in Canada rose from \$9,031 in 1969 to \$21,694 in 1978 (Table

5.37). Some significant shifts took place in the overall expenditure patterns. Income taxes as a percentage of total expenditure increased from 13.7% in 1969 to 16.9% in 1978, security from 4.4% to 5.4%, transportation from 13.1% to 14.0%, and miscellaneous expenses from 1.6% to 2.4% (mainly in categories such as lottery tickets and interest on consumer debt). The share of total expenditure decreased over the nine years in the following categories: food fell from 18.8% in 1969 to 16.6% in 1978; medical and health care from 3.4% to 1.9% (resulting from changes in the coverage and financing of provincial health insurance plans); clothing from 8.3% to 6.9%, and tobacco and alcoholic beverages from 3.7% to 3.1%. All other major expenditure categories were within 0.5% of the proportions which they consumed of the family budget in the 1969 survey year. For this comparison the 1978 data were adjusted to have the same grouping of items as for 1969.

**Analysis by income quintile.** Considering 1978 survey families by income quintiles (families ranked in ascending order of income size and then divided

into five equal groups) the average net income before taxes of the 20% of families in the lowest quintile was \$7,866. The average was \$40,165 for the 20% of families forming the highest quintile.

Percentages of total expenditure on specific items in the family budget showed significant differences. The 20% of families in the lowest group spent on the average 46.2% of their total expenditures on food and shelter alone. The proportion ranged downward to 26.7% for the 20% of families in the highest group. An offsetting difference was the amount for personal taxes, only 3.4% of total expenditures for families in the lowest group but 23.8% for those in the highest quintile. The better financial position of families in the higher quintiles, despite their much larger tax expenditures, is evident in the net change in assets and liabilities for 1978, ranging from an average decrease of \$633 for families in the lowest quintile group to an increase of \$5,190 for those in the highest group. Other differences from the low- to high-income ranges: homeowners, from 56.9% of families to 86.6%; and car or truck owners, from 65.4% to 93.9%.

#### Sources

- 5.1.1, 5.2, 5.3 Public Relations Branch, Department of Labour.
- 5.1.2 Information Division, Canada Employment and Immigration Commission.
- 5.4, 5.6.4 Labour Data Branch, Department of Labour.
- 5.5.1 Labour Force Survey Division, Statistics Canada.
- 5.5.2 Census Characteristics Division, Statistics Canada.
- 5.6.1 - 5.6.3 Labour Division, Statistics Canada.
- 5.7.1 Labour Division, Statistics Canada; Information Division, Canada Employment and Immigration Commission.
- 5.7.2 Benefit Group, Public Affairs, Canada Employment and Immigration Commission.
- 5.7.3 Occupational Safety and Health Branch, Department of Labour.
- 5.8 Labour Force Activities Section, Census and Household Statistics Division, Statistics Canada.
- 5.9 - 5.10 Consumer Income and Expenditure Division, Statistics Canada.

#### Selected references

- Benefit periods established and terminated under the Unemployment Insurance Act*, 1981. Statistics Canada 73-201, Ottawa, 1983.
- 1981 Census of Canada, *Labour force - industry by occupation*. Statistics Canada 92-923, Ottawa, 1984.
- Employment, earnings and hours*, December 1983. Statistics Canada (monthly) 72-002, Ottawa, 1984.
- Historical labour force statistics: actual data, seasonal factors, seasonally adjusted data*, 1983. Statistics Canada 71-201, Ottawa, 1984.
- Income distributions by size in Canada*, 1981. Statistics Canada 13-207, Ottawa, 1983.
- Labour force annual averages, 1975-83*. Statistics Canada 71-529, Ottawa, 1984.
- Pension plans in Canada*, 1980. Statistics Canada 74-401, Ottawa, 1982.
- Trusteed pension plans: financial statistics*. Statistics Canada 74-201, Ottawa, 1983.
- Social security, provincial programs, workmen's/workers' compensation*. Statistics Canada 86-501, Ottawa, 1980.

# TABLES

- .. not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed
- e estimate

p preliminary

r revised

certain tables may not add due to rounding

It should be noted that figures shown for the latest year are subject to revision, and that some figures for earlier years have been revised.

## 5.1 Labour force characteristics, annual averages

Year	Population <sup>1</sup> '000	Labour force '000	Employed '000	Unemployed '000	Participation rate %	Unemployment rate %
1979	17,702	11,231	10,395	836	63.4	7.4
1980	18,053	11,573	10,708	865	64.1	7.5
1981	18,375	11,904	11,006	898	64.8	7.5
1982	18,664	11,958	10,644	1,314	64.1	11.0
1983	18,917	12,183	10,734	1,448	64.4	11.9

<sup>1</sup>Persons 15 years of age and over, excluding inmates of institutions, full-time members of the Canadian Armed Forces, residents of Yukon and Northwest Territories and residents of Indian reserves.

## 5.2 Persons over 15 years of age<sup>1</sup> not in the labour force (thousands)

Year	Male		Female		Total	Proportion of total population of Canada %
	15-24 years	25+ years	15-24 years	25+ years		
1979	654	1,216	881	3,721	6,472	36.6
1980	645	1,266	848	3,720	6,480	35.9
1981	633	1,313	831	3,694	6,471	35.2
1982	693	1,411	841	3,760	6,706	35.9
1983	685	1,472	814	3,764	6,735	35.6

<sup>1</sup>Persons 15 years of age and over, excluding inmates of institutions, full-time members of the Canadian Armed Forces, residents of Yukon and Northwest Territories and residents of Indian reserves.

## 5.3 Percentage of labour force employed and unemployed, by sex and age

Age group and sex	Employed					Unemployed				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Men	61.2	60.3	59.6	58.8	58.1	53.7	55.0	55.1	59.2	59.3
Women	38.8	39.7	40.4	41.2	41.9	46.3	45.0	44.9	40.8	40.7
Age 15-24	25.1	24.8	24.2	22.5	21.8	46.5	46.7	45.4	42.2	40.0
Men	13.6	13.2	12.9	11.6	11.1	25.6	26.0	25.9	25.2	23.8
Women	11.6	11.6	11.4	10.9	10.6	20.9	20.7	19.4	17.0	16.2
Age 25 +	74.9	75.2	75.8	77.5	78.2	53.5	53.3	54.6	57.8	60.0
Men	47.6	47.1	46.7	47.2	47.0	28.1	29.1	29.2	34.0	35.5
Women	27.2	28.1	29.0	30.3	31.2	25.4	24.3	25.5	23.8	24.5

5.4 Employment by sex, age and participation rate

Employed	Annual averages '000					Participation rate				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Total	10,395	10,708	11,006	10,644	10,734	63.4	64.1	64.8	64.1	64.4
Men	6,362	6,459	6,559	6,254	6,240	78.5	78.4	78.4	77.0	76.7
Women	4,033	4,249	4,447	4,390	4,495	49.0	50.4	51.7	51.7	52.6
Age 15-24	2,612	2,657	2,668	2,398	2,337	66.2	67.2	67.7	65.8	66.1
Men	1,410	1,418	1,416	1,235	1,196	71.3	71.8	72.3	69.3	69.2
Women	1,202	1,239	1,251	1,164	1,141	61.0	62.6	63.2	62.3	62.8
Age 25 +	7,783	8,051	8,338	8,245	8,397	62.5	63.1	63.8	63.5	63.9
Men	4,952	5,041	5,142	5,019	5,044	81.0	80.7	80.5	79.5	79.1
Women	2,831	3,011	3,196	3,226	3,354	45.0	46.4	48.1	48.5	49.6

5.5 Employment by province

Province	Annual averages '000					Participation rate				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Newfoundland	170	178	179	174	174	52.3	52.7	52.6	52.1	52.1
Prince Edward Island	46	47	47	45	48	59.0	59.2	58.7	57.8	60.2
Nova Scotia	311	321	322	313	320	56.6	57.4	57.3	57.0	57.4
New Brunswick	243	249	253	243	247	55.0	55.6	56.2	55.0	55.5
Quebec	2,619	2,694	2,726	2,584	2,642	60.2	61.2	61.5	60.0	60.9
Ontario	3,993	4,053	4,171	4,067	4,096	66.5	66.7	67.6	67.3	67.1
Manitoba	450	458	461	454	460	63.6	64.5	64.8	64.9	65.6
Saskatchewan	411	417	425	426	436	62.7	63.0	63.5	63.9	65.2
Alberta	1,007	1,078	1,152	1,132	1,115	69.7	70.9	72.3	71.4	71.6
British Columbia	1,144	1,213	1,270	1,204	1,197	63.2	64.1	65.1	64.3	64.1

5.6 Unemployment by sex, age and rate

Sex and age group	Unemployed '000					Rate				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Total	836	865	898	1,314	1,448	7.4	7.5	7.5	11.0	11.9
Men	449	476	494	778	859	6.6	6.9	7.0	11.1	12.1
Women	387	389	404	537	590	8.8	8.4	8.3	10.9	11.6
Age 15-24	388	404	407	555	579	12.9	13.2	13.2	18.8	19.9
Men	214	225	233	331	345	13.2	13.7	14.1	21.1	22.4
Women	174	179	175	224	234	12.7	12.6	12.3	16.1	17.0
Age 25 +	447	462	491	759	869	5.4	5.4	5.6	8.4	9.4
Men	235	251	262	447	514	4.5	4.8	4.8	8.2	9.2
Women	212	210	229	313	355	7.0	6.5	6.7	8.8	9.6

5.7 Unemployment by province

Province	Annual averages '000					Rate				
	1979	1980	1981	1982	1983	1979	1980	1981	1982	1983
Newfoundland	30	27	29	35	40	15.1	13.3	13.9	16.8	18.8
Prince Edward Island	6	6	6	7	7	11.2	10.6	11.2	12.9	12.2
Nova Scotia	35	35	36	47	49	10.1	9.7	10.2	13.2	13.2
New Brunswick	30	31	33	40	43	11.1	11.0	11.5	14.0	14.8
Quebec	278	294	314	413	427	9.6	9.8	10.3	13.8	13.9
Ontario	141	157	154	252	271	6.5	6.8	6.6	9.8	10.4
Manitoba	25	27	29	42	48	5.3	5.5	5.9	8.5	9.4
Saskatchewan	18	19	21	28	35	4.2	4.4	4.7	6.2	7.4
Alberta	41	42	46	95	134	3.9	3.7	3.8	7.7	10.8
British Columbia	95	88	91	166	192	7.6	6.8	6.7	12.1	13.8

### 5.8 Change in labour force, all occupations

Province or territory	Number of employees		Percentage change	Province or territory	Number of employees		Percentage change
	1971 '000	1981 '000			1971 '000	1981 '000	
Nfld.	147	208	41.5	Sask.	346	446	28.9
PEI	40	53	32.5	Alta.	682	1,198	75.7
NS	276	359	30.1	BC	899	1,361	51.4
NB	210	286	36.2	Yukon	—	—	—
Que.	2,347	3,040	29.5	NWT	—	—	—
Ont.	3,290	4,464	35.7	Canada	8,639	11,904	37.8
Man.	402	490	21.9				

### 5.9 Change in number of employees by occupation group (thousands)

Occupation	1981	1982	Percentage change	1983	Percentage change
Managerial, administrative	892	899	0.8	915	1.8
Natural sciences, engineering and mathematics	409	384	-6.1	379	-1.3
Social sciences	157	174	10.8	180	3.4
Religion	26	28	7.7	32	14.3
Teaching	457	458	0.2	480	4.8
Medicine and health	503	523	4.0	538	2.9
Art, literature and recreation	162	159	-1.9	172	8.2
Clerical	1,946	1,886	-3.1	1,865	-1.1
Sales	1,132	1,120	-1.1	1,139	1.7
Service	1,480	1,477	-0.2	1,542	4.4
Farming, horticultural and animal husbandry	506	481	-4.9	499	3.7
Fishing, hunting and trapping	33	33	—	34	3.0
Forestry and logging	60	51	-15.0	64	25.5
Mining and quarrying	78	61	-21.8	60	-1.6
Processing	390	366	-6.2	357	-2.5
Machining	273	239	-12.5	214	-10.5
Product fabricating, assembling and repairing	1,006	913	-9.2	893	-2.2
Construction trades	665	595	-10.5	576	-3.2
Transport equipment operation	413	402	-2.7	395	-1.7
Materials handling	285	257	-9.8	261	1.6
Other crafts and equipment operation	134	139	3.7	140	0.7
Occupations, n.e.s.	—	—	—	—	—
Occupations not stated	—	—	—	—	—
All occupations	11,006	10,644	-3.3	10,734	0.8

### 5.10 Intended occupations of immigrants

Intended occupation	1979	1980	1981
ENTREPRENEURS	285	266	293
WORKERS			
Managerial and administrative	2,524	3,065	3,601
Natural sciences, engineering and mathematics			
Physical sciences	371	592	655
Life sciences	202	225	277
Architects and engineers	891	1,316	2,249
Architecture and engineering	1,576	2,056	2,415
Mathematics, statistics and systems analysis	480	843	1,336
Social sciences	156	196	222
Social work	132	124	143
Law and jurisprudence	52	71	89
Library, museum and archival sciences	80	107	101
Religion	463	425	469
Teaching	1,489	1,895	1,677

**5.10 Intended occupations of immigrants (concluded)**

Intended occupation	1979	1980	1981
Medicine and health			
Health diagnosing and treating	418	521	531
Nursing and therapy	1,228	1,464	1,721
Other medicine and health	590	696	651
Artistic, literary and performing arts	951	1,111	1,131
Sport and recreation	118	119	111
Clerical and related occupations	5,759	7,207	7,044
Sales	1,792	2,476	2,151
Services	3,952	4,648	4,250
Farming, horticultural and animal husbandry	1,597	2,462	2,931
Fishing, hunting and trapping	75	227	135
Forestry and logging	32	41	19
Mining and quarrying, including oil and gas fields	53	75	67
Processing	1,154	1,544	1,170
Machining and related occupations	2,270	2,867	2,529
Product fabricating, assembling and repairing	7,232	10,383	6,296
Construction	2,287	2,918	2,194
Transport equipment operating	808	1,195	691
Material-handling and related (n.e.c.) <sup>1</sup>	344	447	361
Other crafts and equipment operating	316	441	313
Not stated and unknown	8,557	11,722	9,146
<b>Total, workers</b>	<b>48,234</b>	<b>63,745</b>	<b>56,969</b>
<b>NON-WORKERS</b>			
Spouses	17,231	19,326	19,017
Children	26,155	24,808	16,956
Other	20,476	35,238	35,676
<b>Total, non-workers</b>	<b>63,862</b>	<b>79,372</b>	<b>71,649</b>
<b>Total, immigrants</b>	<b>112,096</b>	<b>143,117</b>	<b>128,618</b>

<sup>1</sup>Not elsewhere classified.**5.11 Union membership in Canada, 1971-83**

Year	Members '000	Union membership as percentage of civilian labour force	Union membership as percentage of non-agricultural paid workers
1971	2,231	26.8	33.6
1972	2,388	27.8	34.6
1973	2,591	29.2	36.1
1974	2,732	29.4	35.8
1975	2,884	29.8	36.9
1976	3,042	30.6	37.3
1977	3,149	31.0	38.2
1978	3,278	31.3	39.0
1979	-	-	-
1980	3,397	30.5	37.6
1981	3,487	30.6	37.4
1982	3,617	31.4	39.0
1983	3,563	30.6	40.0

## 5.12 Union membership, by type of union and affiliation, as at January 1980-83

B.12 Union membership by type of union and affiliation						
Type and affiliation	Unions No.	Membership		Unions No.	Membership	
		No.	%		No.	%
<hr/>						
	1980			1981		
International unions	80	1,570,654	46.3	80	1,557,792	44.7
AFL-CIO/CLC	64	1,304,680	38.4	64	1,286,775	36.9
CLC only	5	162,027	4.8	5	166,254	4.8
AFL-CIO only	6	3,441	0.1	6	2,958	0.1
Unaffiliated unions	5	100,506	3.0	5	101,805	2.9
National unions	128	1,703,024	50.1	128	1,812,983	52.0
CLC	22	849,760	25.0	22	905,322	26.0
CNTU	10	186,656	5.5	10	209,900	6.0
CSD	3	25,445	0.7	3	26,555	0.8
CCU	13	27,350	0.8	13	29,776	0.8
Unaffiliated unions	80	613,813	18.1	80	641,430	18.4
Directly chartered local unions	284	31,509	0.9	284	29,438	0.8
CLC	107	12,600	0.4	107	11,000	0.3
CNTU	3	530	1	3	530	1
CSD	174	18,379	0.5	174	17,908	0.5
Independent local organizations	242	91,534	2.7	242	87,018	2.5
Total	734	3,396,721	100.0	734	3,487,231	100.0
<hr/>						
	1982			1983		
International unions	76	1,599,705	44.2	74	1,470,433	41.3
AFL-CIO/CLC	48	963,557	26.6	46	851,341	23.9
AFL-CIO/CFL	10	202,494	5.6	10	213,301	6.0
CLC only	5	161,615	4.6	5	134,008	3.8
AFL-CIO only	7	165,905	4.6	7	167,515	4.7
Unaffiliated unions	6	106,134	2.8	6	104,268	2.9
National unions	146	1,876,121	51.9	146	1,945,982	54.6
CLC	26	946,279	26.2	27	1,018,792	28.6
CNTU	10	216,894	6.0	10	212,646	6.0
CSD	3	24,477	0.7	3	21,826	0.6
CCU	19	35,912	1.0	20	38,684	1.1
Unaffiliated unions	88	652,559	18.0	86	654,034	18.3
Directly chartered local unions	368	45,262	1.2	366	44,633	1.2
CLC	77	11,000	0.3	74	8,909	0.2
CNTU	5	661	1	5	724	1
CSD	286	33,601	0.9	287	35,000	1.0
Independent local organizations	246	96,240	2.7	240	101,751	2.9
Total	836	3,617,328	100.0	826	3,562,799	100.0

<sup>1</sup>Less than 0.1%.

## 5.13 Major wage settlements, average annual increases in base rates of pay

Year and sector	Average annual percentage increases				Annual
	1st quarter	2nd quarter	3rd quarter	4th quarter	
1980					
All industries <sup>1</sup>					
Agreements without COLA	9.6	11.2	11.6	11.7	11.1
Agreements with COLA <sup>2</sup>	8.8	9.0	9.4	8.1	8.9
Commercial sector <sup>1</sup>					
Agreements without COLA	10.7	10.9	12.1	11.7	11.6
Agreements with COLA <sup>2</sup>	8.1	8.1	9.0	7.6	8.2
Non-commercial sector					
Agreements without COLA	9.3	11.2	11.1	11.7	11.1
Agreements with COLA <sup>2</sup>	9.1	10.1	10.2	9.2	9.4
1981					
All industries <sup>1</sup>					
Agreements without COLA	13.7	12.6	13.8	13.9	13.3
Agreements with COLA <sup>2</sup>	8.7	9.4	11.0	9.7	10.0
Commercial sector <sup>1</sup>					
Agreements without COLA	14.1	12.8	14.4	13.8	13.8
Agreements with COLA <sup>2</sup>	8.3	8.8	11.1	9.6	10.0

**5.13 Major wage settlements, average annual increases in base rates of pay (concluded)**

Year and sector	Average annual percentage increases				Annual
	1st quarter	2nd quarter	3rd quarter	4th quarter	
Non-commercial sector					
Agreements without COLA	13.4	12.5	13.4	14.1	13.1
Agreements with COLA <sup>2</sup>	11.2	10.8	6.7	12.1	10.5
1982					
All industries <sup>1</sup>					
Agreements without COLA	12.9	12.8	10.2	7.2	10.0
Agreements with COLA <sup>2</sup>	10.7	11.4	6.2	3.0	9.0
Commercial sector <sup>1</sup>					
Agreements without COLA	13.1	11.8	10.2	7.5	9.5
Agreements with COLA <sup>2</sup>	10.8	11.1	5.8	2.8	8.4
Non-commercial sector					
Agreements without COLA	12.9	13.0	10.1	7.1	10.3
Agreements with COLA <sup>2</sup>	8.8	11.8	9.2	7.1	11.0

<sup>1</sup>Excluding construction.<sup>2</sup>Agreements with Cost-of-Living Adjustments (COLA) exclude the amounts that will be generated by such clauses. The figures therefore understate the eventual rate of increase. The amount depends on the characteristics of the contract, specific formula and the change in the CPI.**5.14 Strikes and lockouts, by industry and jurisdiction**

Year, industry and jurisdiction	Strikes and lockouts beginning during year	Strikes and lockouts in existence during year		
		Strikes and lockouts	Workers involved	Person-days lost
1979				
INDUSTRY				
Agriculture	1	1	12	10
Forestry	10	11	2,632	110,940
Fishing and trapping	—	—	—	—
Mining	34	40	28,396	1,586,360
Manufacturing	475	511	149,656	3,129,460
Construction	47	48	10,839	88,290
Transportation and utilities	123	129	79,933	1,181,580
Trade	76	78	16,442	247,410
Finance	18	18	2,164	38,110
Service	128	139	64,855	760,600
Public administration	74	74	58,845	642,740
Various industries	1	1	48,730	48,730
JURISDICTION				
Newfoundland	33	33	6,766	51,940
Prince Edward Island	3	3	81	3,340
Nova Scotia	33	34	3,850	40,270
New Brunswick	29	30	5,230	100,150
Quebec	342	377	218,951	3,273,510
Ontario	295	308	106,630	2,529,050
Manitoba	27	27	2,474	31,120
Saskatchewan	24	27	19,030	329,980
Alberta	26	27	2,245	62,560
British Columbia	118	124	47,855	645,780
Yukon and Northwest Territories	—	—	—	—
Federal public service	11	11	2,045	23,810
Federal industries	46	49	47,347	742,720
1980				
INDUSTRY				
Agriculture	1	1	30	900
Forestry	8	8	3,588	337,220
Fishing and trapping	2	2	16,082	395,870
Mining	33	33	21,400	418,270
Manufacturing	365	404	86,247	3,137,370
Construction	68	69	57,940	1,107,060
Transportation and utilities	97	106	27,329	728,070
Trade	103	109	7,855	218,550
Finance	17	20	1,238	47,710
Service	203	218	136,193	1,883,280
Public administration	55	58	83,123	700,090

## 5.14 Strikes and lockouts, by industry and jurisdiction (concluded)

Year, industry and jurisdiction	Strikes and lockouts beginning during year	Strikes and lockouts in existence during year		
		Strikes and lockouts	Workers involved	Person- days lost
<b>JURISDICTION</b>				
Newfoundland	38	40	31,331	842,110
Prince Edward Island	1	2	291	2,000
Nova Scotia	23	25	3,795	217,850
New Brunswick	25	25	12,231	264,570
Quebec	313	346	170,293	3,952,330
Ontario	246	268	80,014	1,676,110
Manitoba	49	50	4,243	75,890
Saskatchewan	46	47	10,031	62,320
Alberta	43	43	24,269	538,680
British Columbia	105	113	32,694	389,610
Yukon and Northwest Territories	—	—	—	—
Federal public service	17	17	49,937	332,990
Federal industries	46	52	21,896	620,930
<b>1981</b>				
<b>INDUSTRY</b>				
Agriculture	3	3	65	7,750
Forestry	9	14	3,292	349,400
Fishing and trapping	1	1	400	330
Mining	40	42	24,359	580,720
Manufacturing	380	423	157,207	4,638,290
Construction	42	44	5,780	43,280
Transportation and utilities	93	101	58,135	1,513,970
Trade	65	90	4,886	149,170
Finance	15	18	3,480	294,760
Service	207	221	57,248	577,400
Public administration	87	90	17,696	717,420
Various industries	1	1	6,000	6,000
<b>JURISDICTION</b>				
Newfoundland	31	32	4,981	44,950
Prince Edward Island	5	5	576	18,760
Nova Scotia	52	54	5,591	115,170
New Brunswick	58	59	16,898	82,870
Quebec	284	331	46,246	1,469,830
Ontario	225	243	74,731	2,258,620
Manitoba	33	33	5,637	186,530
Saskatchewan	28	31	4,865	62,900
Alberta	30	43	7,798	207,700
British Columbia	142	155	114,199	2,787,130
Yukon and Northwest Territories	—	—	—	—
Federal public service	11	11	23,700	664,330
Federal industries	44	51	33,366	979,700
<b>1982</b>				
<b>INDUSTRY</b>				
Agriculture	1	3	64	7,320
Forestry	2	3	215	7,840
Fishing and trapping	—	—	—	—
Mining	5	8	12,686	257,140
Manufacturing	263	292	63,959	1,690,560
Construction	63	63	94,228	2,199,610
Transportation and utilities	59	67	24,005	565,740
Trade	58	72	4,465	171,180
Finance	11	15	746	49,620
Service	103	110	27,846	415,380
Public administration	42	43	36,088	251,030
Various industries	1	1	180,000	180,000
<b>JURISDICTION</b>				
Newfoundland	17	18	5,100	62,030
Prince Edward Island	2	2	52	2,580
Nova Scotia	14	15	2,663	52,250
New Brunswick	29	30	7,464	89,180
Quebec	210	243	217,504	1,280,820
Ontario	197	215	89,044	2,207,020
Manitoba	7	10	600	16,200
Saskatchewan	32	32	11,641	416,290
Alberta	27	27	20,577	334,630
British Columbia	43	49	76,626	987,510
Yukon and Northwest Territories	—	—	—	—
Federal public service	1	1	270	270
Federal industries	29	35	12,761	346,640
<b>Total</b>				
1979	987	1,050	462,504	7,834,230
1980	952	1,028	441,025	8,975,390
1981	943	1,048	338,548	8,878,490
1982	608	677	444,302	5,795,420

## 5.15 Employees by industrial division and province, firms with 20 or more employed

Industry and province	Employees			
	1979	1980	1981	1982
<b>INDUSTRY</b>				
Forestry	54,046	51,624	47,599	39,906
Mining (incl. milling)	134,600	150,607	155,730	138,478
Manufacturing	1,642,740	1,613,688	1,623,870	1,471,470
Durable goods <sup>1</sup>	813,338	789,572	787,838	692,716
Non-durable goods <sup>1</sup>	829,403	824,117	836,032	778,755
Construction	202,617	194,306	204,333	177,657
Transportation, communication and other utilities	713,666	737,254	741,851	724,087
Trade	879,445	898,280	919,139	864,927
Finance, insurance and real estate	374,705	379,906	393,371	397,016
Service	601,310	628,006	668,655	652,978
Industrial composite	4,603,130	4,653,673	4,754,547	4,466,517
<b>PROVINCE (industrial composite)</b>				
Newfoundland	64,011	62,039	62,820	57,203
Prince Edward Island	11,136	11,249	10,151	10,591
Nova Scotia	120,968	120,968	120,451	112,042
New Brunswick	99,775	99,377	99,261	91,953
Quebec	1,140,657	1,133,436	1,142,044	1,048,365
Ontario	1,971,735	1,981,022	2,028,210	1,929,911
Manitoba	194,511	195,573	198,578	187,780
Saskatchewan	109,211	112,834	117,673	112,981
Alberta	397,928	427,605	455,124	435,131
British Columbia	484,907	501,249	509,669	470,812

<sup>1</sup>Durable goods manufacturing includes wood products, furniture and fixtures, primary metal industries, metal fabricating industries, machinery (except electrical), transportation equipment, electrical products and non-metallic mineral products, non-durable goods manufacturing includes all other manufacturing industries.

## 5.16 Employment indexes and average weekly earnings by industrial division

Industry	Employment (1961 = 100)				Average weekly earnings (all employees) (dollars)			
	1979	1980	1981	1982	1979	1980	1981	1982
Forestry	83.1	79.3	73.1	61.6	360.89	404.87	452.87	487.16
Mining (incl. milling)	128.1	142.8	147.8	131.5	419.39	468.60	534.35	608.26
Manufacturing	131.4	129.0	129.8	117.6	311.19	342.19	383.75	424.40
Durable goods <sup>1</sup>	145.7	141.2	140.9	123.6	331.44	364.69	408.72	450.48
Non-durable goods <sup>1</sup>	120.0	119.1	120.9	112.7	291.33	320.65	360.23	401.21
Construction	96.8	93.6	98.7	85.1	422.90	461.59	521.31	558.63
Transportation, communication and other utilities	134.8	139.3	140.5	137.1	341.45	381.17	427.47	481.99
Trade	179.1	182.4	185.9	175.1	218.75	238.53	262.56	281.91
Finance, insurance and real estate	205.8	208.7	215.4	216.9	272.10	304.37	353.71	390.22
Service	271.3	283.7	301.8	294.8	193.26	211.17	234.86	260.62
Industrial composite	150.7	152.4	155.6	146.1	288.32	317.39	355.28	390.75

<sup>1</sup>Durable goods manufacturing includes wood products, furniture and fixtures, primary metal industries, metal fabricating industries, machinery (except electrical), transportation equipment, electrical products and non-metallic mineral products, non-durable goods manufacturing includes all other manufacturing industries.

## 5.17 By province, employment indexes and average weekly earnings

Province (industrial composite)	Employment (1961 = 100)				Average weekly earnings (all employees) (dollars)			
	1979	1980	1981	1982	1979	1980	1981	1982
Newfoundland	133.3	129.2	130.9	119.2	271.64	288.90	328.08	362.42
Prince Edward Island	164.4	166.1	162.2	156.4	209.77	230.03	250.13	278.06
Nova Scotia	139.2	139.4	138.8	129.1	245.23	265.95	296.35	328.77
New Brunswick	137.6	137.3	137.1	127.3	261.98	284.36	313.37	342.27
Quebec	128.3	127.4	128.4	117.8	284.18	315.36	351.57	386.10
Ontario	155.3	155.9	159.7	151.6	285.57	311.45	347.92	381.88
Manitoba	128.6	129.2	131.3	124.5	259.00	283.20	314.42	346.02
Saskatchewan	148.9	154.0	160.7	154.3	275.79	303.71	336.76	373.69
Alberta	218.1	234.5	249.6	238.7	306.79	341.93	390.40	435.25
British Columbia	180.4	186.4	189.2	174.9	327.14	363.51	407.03	445.44

## 5.18 Annual employment indexes and average weekly earnings by urban area

Urban area (industrial composite)	Employment (1961 = 100)				Average weekly earnings (all employees) (dollars)			
	1979	1980	1981	1982	1979	1980	1981	1982
Corner Brook, Nfld.	113.9	107.1	101.6	93.5	294.44	324.30	371.20	389.00
St. John's, Nfld.	161.8	156.7	157.2	146.5	244.03	261.87	299.88	334.39
Halifax, NS	150.7	152.7	153.2	148.7	238.50	257.15	287.51	317.51
Sydney, NS	98.4	97.6	90.3	85.8	267.84	296.62	315.86	366.54
Moncton, NB	151.3	151.9	153.3	142.6	235.84	255.50	284.05	311.09
Saint John, NB	126.5	126.6	130.0	117.4	266.85	294.17	327.29	356.77
Chicoutimi, Que.	115.5	123.1	128.4	112.6	314.86	350.35	412.68	458.82
Drummondville, Que.	127.0	118.9	116.7	98.9	235.39	259.22	285.11	306.71
Granby, Que.	126.6	116.5	120.3	102.8	233.49	256.30	289.30	328.63
Montréal, Que.	127.0	126.0	128.0	118.4	283.43	313.78	349.22	384.12
Ottawa, Ont.-Hull, Que.	180.6	178.6	182.0	182.2	259.89	284.17	318.67	355.28
Québec, Que.	137.6	137.3	137.5	131.0	259.24	286.24	318.22	350.82
Rouyn-Noranda, Que.	88.1	92.2	94.8	83.8	300.75	338.47	379.51	401.78
Saint-Hyacinthe, Que.	127.6	124.7	126.3	111.0	238.14	260.81	289.99	326.90
Saint-Jean, Que.	131.7	130.4	134.6	120.0	247.33	270.56	298.48	324.88
Saint-Jérôme, Que.	153.5	151.4	147.9	125.4	249.91	270.67	301.83	329.68
Shawinigan, Que.	86.6	83.8	82.5	72.2	304.46	331.54	387.84	419.67
Sherbrooke, Que.	142.4	139.6	137.1	120.5	231.22	254.24	281.68	302.60
Sorel, Que.	184.9	189.6	174.7	151.4	354.70	385.23	418.08	467.37
Theftford Mines, Que.	134.4	117.9	111.9	93.7	333.64	366.44	398.09	412.89
Trois-Rivières, Que.	115.7	106.8	109.9	101.2	280.20	301.74	341.21	374.15
Valleyfield, Que.	147.6	148.7	146.6	133.0	299.02	337.06	385.75	421.70
Barrie, Ont.	249.3	252.3	262.0	261.2	239.10	267.18	291.46	316.93
Belleville, Ont.	152.6	151.4	153.8	139.7	242.05	268.33	305.32	338.18
Brampton, Ont.	335.9	346.0	370.0	349.3	283.57	308.54	344.81	374.83
Brantford, Ont.	168.6	157.6	158.1	135.3	272.41	288.56	318.12	334.35
Brockville, Ont.	135.3	131.7	134.4	123.9	283.06	304.80	342.92	385.42
Chatham, Ont.	206.0	185.5	184.2	168.7	295.76	313.34	345.03	382.15
Cornwall, Ont.	134.1	132.6	129.2	126.4	276.34	290.71	325.03	350.86
Guelph, Ont.	172.7	176.4	175.5	163.8	268.54	286.38	323.66	345.47
Hamilton, Ont.	139.3	141.0	136.9	131.6	300.66	323.98	357.07	394.80
Kingston, Ont.	144.1	139.6	142.2	134.5	258.75	280.06	315.89	343.38
Kitchener-Cambridge-Waterloo, Ont.	176.3	169.3	174.0	158.7	256.12	277.58	310.55	336.03
London, Ont.	146.4	145.9	149.6	142.5	265.13	288.12	319.98	344.26
Midland, Ont.	192.2	198.4	214.3	187.4	237.92	262.81	278.52	295.68
Niagara Falls, Ont.	133.3	136.9	138.3	127.6	256.84	274.51	302.08	326.27
North Bay, Ont.	150.9	159.2	167.4	150.5	261.13	288.51	323.68	346.25
Orillia, Ont.	141.9	140.3	135.2	131.7	223.31	251.44	271.89	280.84
Oshawa, Ont.	164.7	157.4	159.6	155.4	334.40	366.76	402.35	431.71
Owen Sound, Ont.	172.7	162.4	166.1	155.8	239.35	264.74	291.13	318.84
Pembroke, Ont.	125.4	128.2	127.8	117.9	217.27	236.21	260.51	286.94
Peterborough, Ont.	147.5	151.0	147.8	138.6	274.39	295.51	324.78	345.12
Port Hope, Ont.	180.2	168.6	157.2	141.3	287.47	308.14	340.99	372.49
St. Catharines, Ont.	149.1	139.8	144.2	135.5	327.20	336.55	394.48	424.12
St. Thomas, Ont.	245.1	232.0	211.2	212.9	283.52	326.20	348.23	379.54
Sarnia, Ont.	150.6	151.1	165.0	165.8	366.92	408.25	458.76	508.17
Sault Ste Marie, Ont.	144.7	148.8	155.2	132.8	327.43	346.24	379.11	430.90
Stratford, Ont.	179.6	167.4	163.7	149.9	245.45	264.28	294.03	324.43
Sudbury, Ont.	84.1	104.2	104.8	83.1	291.93	337.77	369.26	381.55
Thunder Bay, Ont.	156.7	153.5	162.0	135.7	303.06	324.71	357.19	391.66
Timmins, Ont.	112.1	121.5	133.4	135.1	292.31	332.28	367.95	413.15
Toronto, Ont.	166.6	170.4	176.0	169.8	283.69	310.66	348.49	385.09
Welland, Ont.	109.3	104.7	111.9	92.4	334.31	365.56	423.28	426.74
Windsor, Ont.	167.9	142.3	148.4	144.3	317.79	343.60	378.24	397.95
Woodstock, Ont.	145.0	136.4	135.7	111.8	271.97	297.00	329.62	361.44
Brandon, Man.	154.5	154.9	150.9	148.2	210.23	228.13	254.38	276.58
Winnipeg, Man.	134.6	135.1	137.1	131.0	244.84	266.63	296.96	326.46
Moose Jaw, Sask.	104.7	107.6	112.4	107.1	226.88	240.99	265.82	301.36
Prince Albert, Sask.	160.4	168.1	172.9	173.3	272.73	292.12	320.06	344.72
Regina, Sask.	161.8	163.9	172.8	167.3	271.38	298.43	323.30	362.79
Saskatoon, Sask.	172.0	180.4	185.8	184.8	249.07	271.13	302.84	334.50
Calgary, Alta.	243.8	265.1	291.6	281.1	296.62	337.37	391.97	444.09
Edmonton, Alta.	222.2	234.4	244.8	233.0	291.08	320.54	362.87	399.75
Lethbridge, Alta.	222.8	229.3	237.6	233.1	248.75	262.38	298.51	332.38
Medicine Hat, Alta.	180.6	198.3	204.0	190.7	280.28	298.55	341.26	368.21
Red Deer, Alta.	444.9	439.7	484.5	473.9	233.18	260.77	286.15	315.80
Kamloops, BC	313.9	339.7	348.4	327.8	285.05	318.77	351.53	396.79
Prince George, BC	306.0	321.0	323.6	310.5	331.23	370.27	411.13	461.71
Vancouver, BC	176.6	186.0	191.8	178.7	315.97	355.56	395.63	432.65
Victoria, BC	164.3	166.0	172.6	157.8	263.42	287.97	323.38	354.87

## 5.19 Average weekly hours and hourly earnings in specified industries

Industry	Average weekly hours				Average hourly earnings (\$)			
	1979	1980	1981	1982	1979	1980	1981	1982
Mining (incl. milling)	41.1	40.8	40.2	39.6	9.66	10.80	12.23	13.92
Metal mining	40.4	40.1	40.0	39.1	9.60	10.58	12.02	13.74
Coal mining	40.4	41.1	40.4	41.1	9.02	10.48	12.01	13.66
Manufacturing	38.8	38.5	38.5	37.7	7.44	8.19	9.17	10.23
Durable goods <sup>1</sup>	39.5	39.2	39.3	38.4	7.90	8.72	9.74	10.91
Non-durable goods <sup>1</sup>	38.1	37.8	37.8	37.0	6.93	7.62	8.57	9.60
Construction	39.4	39.0	38.9	38.1	11.08	12.11	13.70	14.83
Building	37.9	37.6	37.6	36.7	11.28	12.48	14.04	15.15
Engineering	42.6	41.9	41.9	41.0	10.69	11.42	13.02	14.30
Other engineering	42.2	41.6	41.8	40.7	12.14	12.75	14.51	15.74
Urban transit	40.3	41.4	41.0	40.9	8.55	9.44	10.42	11.88
Highway and bridge maintenance	40.0	40.3	40.3	40.4	7.13	7.78	8.70	9.84
Hotels, restaurants and taverns	25.9	25.9	25.6	25.0	4.23	4.50	4.89	5.36
Laundries, cleaners and pressers	33.1	33.5	34.0	33.7	4.46	4.76	5.25	5.77

<sup>1</sup>Durable goods manufacturing includes wood products, furniture and fixtures, primary metal industries, metal fabricating industries, machinery (except electrical), transportation equipment, electrical products and non-metallic mineral products, non-durable goods manufacturing includes all other manufacturing industries.

## 5.20 Average weekly hours and hourly earnings of wage-earners in manufacturing

Province and urban area	Average weekly hours				Average hourly earnings (\$)			
	1979	1980	1981	1982	1979	1980	1981	1982
PROVINCE								
Newfoundland	37.6	35.9	36.1	36.4	6.79	7.38	8.60	9.27
Nova Scotia	38.3	38.2	37.7	36.7	6.65	7.25	8.16	9.07
New Brunswick	38.8	39.0	38.6	37.0	6.79	7.42	8.46	9.39
Quebec	38.9	38.9	38.8	37.9	6.80	7.54	8.47	9.46
Ontario	39.4	39.0	39.1	38.3	7.48	8.17	9.13	10.16
Manitoba	37.3	37.6	37.7	37.0	6.53	7.20	8.04	9.07
Saskatchewan	37.0	37.0	36.9	35.8	8.06	8.79	10.12	11.14
Alberta	37.9	37.9	38.2	37.1	8.21	9.21	10.49	11.94
British Columbia	36.3	36.2	35.5	34.7	9.73	10.82	12.19	13.89
SELECTED URBAN AREA								
Montréal	38.4	38.5	38.5	37.5	6.77	7.49	8.33	9.23
Toronto	39.4	38.9	39.1	38.4	6.95	7.59	8.43	9.33
Hamilton	39.7	39.4	39.4	38.4	8.34	9.08	10.15	11.79
Windsor	40.1	39.2	40.3	40.0	8.81	10.11	10.86	11.46
Winnipeg	37.4	37.7	37.8	37.1	6.43	7.02	7.76	8.86
Vancouver	36.2	35.9	35.4	34.3	9.33	10.25	11.60	13.16

## 5.21 Total wages and salaries paid and supplementary labour income (million dollars)

Industry and province	1979	1980	1981	1982
INDUSTRY				
Agriculture, fishing and trapping	1,452	1,560	1,684	1,814
Forestry	1,500	1,639	1,679	1,526
Mines, quarries and oil wells	3,678	4,628	5,444	5,554
Manufacturing	30,870	33,921	38,077	38,091
Construction	9,579	10,308	12,083	11,249
Transportation, communications and other utilities	14,323	16,659	18,661	20,600
Trade	17,520	19,769	22,047	22,372
Finance, insurance and real estate	9,166	10,550	12,032	13,233
Commercial and personal services	12,637	14,476	16,836	18,259
Education and related services	13,345	14,962	17,106	19,390
Health and welfare services	8,385	9,944	11,556	13,093
Federal administration and other government offices	4,935	5,334	6,465	7,519
Provincial administration	3,921	4,755	5,202	5,925
Local administration	3,125	3,542	4,048	4,718

### 5.21 Total wages and salaries paid and supplementary labour income (million dollars) (concluded)

Industry and province	1979	1980	1981	1982
PROVINCE				
Newfoundland	1,949	2,098	2,421	2,603
Prince Edward Island	380	430	471	518
Nova Scotia	3,550	3,933	4,364	4,678
New Brunswick	2,843	3,009	3,311	3,492
Quebec	32,797	37,118	41,555	43,006
Ontario	54,329	60,522	68,819	73,354
Manitoba	5,183	5,766	6,506	7,025
Saskatchewan	4,100	4,747	5,414	5,882
Alberta	12,547	14,970	18,068	19,942
British Columbia	16,275	18,883	21,303	22,101
Total wages and salaries	134,435	152,047	172,921	183,343
Supplementary labour income	10,777	11,739	13,707	14,516
Total labour income	145,212	163,785	186,628	197,859

### 5.22 Help-wanted index, seasonally adjusted, annual averages 1979-82 and by month 1981 and 1982 (1981 = 100)

Year and month	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Canada
1979	109	115	88	88	55	93
1980	111	116	89	92	71	96
1981	100	100	100	100	100	100
1982	66	50	52	43	35	48
1981						
January	119	102	94	94	111	99
February	107	114	103	96	101	105
March	94	112	109	101	106	107
April	76	74	70	88	87	77
May	88	115	93	102	106	102
June	85	114	108	107	111	109
July	94	104	106	108	99	106
August	104	104	114	105	100	108
September	106	99	100	105	118	103
October	117	90	109	99	88	101
November	131	87	102	93	85	94
December	91	79	87	94	78	83
1982						
January	64	72	81	81	72	76
February	93	73	70	70	60	71
March	66	62	73	58	50	64
April	63	56	59	51	42	55
May	76	52	65	45	34	54
June	75	40	45	34	27	41
July	61	41	46	33	22	40
August	77	43	42	29	22	39
September	54	37	38	28	23	35
October	61	41	34	26	23	35
November	62	37	34	29	22	34
December	44	48	42	29	23	39

5.23 Working conditions of employees in major industries<sup>1</sup>

Item	Office employees <sup>2</sup>					Non-office employees				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
Reporting establishments	15,102	14,623	14,118	13,435	13,307	13,898	13,391	12,853	12,235	12,191
Employees ('000)	1,218	1,269	1,311	1,338	1,350	1,545	1,587	1,621	1,602	1,523
<b>HOURS OF WORK</b>	Office (percentage <sup>3</sup> )					Non-office (percentage <sup>3</sup> )				
Less than 35 hours	3	3	4	3	3	—	—	—	—	—
35 hours	28	26	29	28	29	3	3	3	3	3
Over 35 and under 37½ hours	15	15	14	14	15	1	1	1	2	2
37½ hours	41	43	41	45	43	6	7	6	8	10
Over 37½ and under 40 hours	1	1	1	1	1	6	5	6	6	7
40 hours	10	9	9	7	9	74	73	74	72	68
Over 40 hours	—	—	—	—	—	8	8	7	7	6
<b>Paid holidays</b>										
Less than 10 days	12	10	8	8	7	19	19	17	17	17
10 days	29	24	23	16	16	24	22	19	14	15
11 days	41	43	43	50	49	36	35	36	39	38
More than 11 days	18	21	25	25	27	20	24	28	31	31
<b>VACATION WITH PAY<sup>4</sup></b>										
3 weeks	96	95	92	92	92	91	90	93	93	92
Service required,										
Less than 5 years	68	70	69	73	74	41	44	46	49	52
5 years	23	21	20	16	15	36	36	36	35	34
More than 5 years	5	3	4	3	3	14	10	10	8	7
4 weeks	95	95	96	97	97	86	86	89	90	90
Service required,										
Less than 10 years	14	15	28	29	32	11	14	17	23	30
10 years	32	46	38	43	46	20	19	27	29	29
More than 10 years	49	34	30	26	19	56	51	45	39	30
5 weeks	80	82	85	85	89	66	69	73	75	76
Service required,										
Less than 25 years	39	48	69	71	75	41	48	54	61	66
25 years	25	34	15	13	13	16	12	17	14	10
More than 25 years	14	1	1	1	—	8	8	—	—	—
6 weeks	18	17	22	25	28	25	27	31	36	41
Service required,										
Less than 30 years	12	10	13	17	20	15	16	18	25	30
30 years	7	6	8	8	9	9	10	11	11	9
More than 30 years	1	1	—	—	—	1	1	1	—	—
7 weeks	...	1	2	2	3	...	3	3	5	10
Service required,										
Less than 30 years	...	1	1	1	1	...	1	2	2	4
30 years	...	—	—	—	—	...	1	1	2	6
More than 30 years	...	—	—	—	—	...	—	—	1	1

<sup>1</sup>Includes all major industries except agriculture, fishing, hunting, trapping, construction and the non-logging part of forestry.

<sup>2</sup>Supervisory, professional and technical staff, and personnel engaged in clerical, accounting, secretarial, sales, executive and administrative activities.

<sup>3</sup>Proportion of employees in establishments reporting specific provisions to the total number of employees in all reporting establishments.

<sup>4</sup>Legislation in all jurisdictions in Canada entitle employees to at least 2 weeks annual vacation with pay generally after 1 year of employment.

## 5.24 Working conditions of employees in manufacturing industries

Item	Office employees <sup>1</sup>					Non-office employees				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
Reporting establishments	5,271	5,074	5,058	4,755	4,596	5,263	5,076	5,054	4,742	4,582
Employees ('000)	237	234	248	248	236	709	705	730	716	640
<b>HOURS OF WORK</b>	Office (percentage <sup>2</sup> )					Non-office (percentage <sup>2</sup> )				
Less than 35 hours	2	2	1	1	2	—	—	—	—	—
35 hours	22	21	21	22	21	2	2	2	2	3
Over 35 and under 37½ hours	10	10	10	10	11	2	2	2	2	2
37½ hours	42	42	43	42	39	2	3	3	3	3
Over 37½ and under 40 hours	4	4	5	5	5	1	1	1	2	2
40 hours	20	20	19	19	22	82	81	82	83	82
Over 40 hours	—	—	—	—	—	8	9	8	7	7

## 5.24 Working conditions of employees in manufacturing industries (concluded)

Item	Office employees <sup>1</sup>					Non-office employees				
	1978	1979	1980	1981	1982	1978	1979	1980	1981	1982
<b>Paid holidays</b>										
Less than 10 days	12	10	8	8	7	22	20	18	18	15
10 days	29	24	23	16	16	20	18	16	15	13
11 days	41	43	43	50	49	28	27	25	24	26
More than 11 days	18	21	25	25	27	29	34	39	45	46
<b>VACATION WITH PAY<sup>3</sup></b>										
3 weeks	96	95	92	92	92	94	94	96	96	96
Service required,										
Less than 5 years	68	70	69	73	74	22	22	24	29	35
5 years	23	21	20	16	15	52	56	57	55	50
More than 5 years	5	3	4	3	3	20	16	15	12	11
4 weeks	95	95	96	97	97	86	86	89	91	91
Service required,										
Less than 10 years	14	15	28	29	32	5	9	11	15	24
10 years	32	46	38	43	46	17	14	17	19	21
More than 10 years	49	34	30	26	19	64	63	61	56	45
5 weeks	80	82	85	85	89	66	68	72	75	76
Service required,										
Less than 25 years	39	48	69	71	75	46	54	59	65	67
25 years	25	34	15	13	13	18	13	13	9	7
More than 25 years	14	1	1	1	-	1	1	1	1	1
6 weeks	18	17	22	25	28	28	30	34	39	42
Service required,										
Less than 30 years	12	10	13	17	20	17	19	21	25	32
30 years	7	6	8	8	9	10	10	13	13	10
More than 30 years	1	1	-	-	-	1	1	1	1	1
7 weeks	...	1	2	2	3	...	3	4	8	15
Service required,										
Less than 30 years	...	1	1	1	1	...	1	1	2	3
30 years	...	—	—	—	1	...	2	2	3	10
More than 30 years	...	—	—	—	—	...	—	1	2	2

<sup>1</sup>Supervisory, professional and technical staff, and personnel engaged in clerical, accounting, secretarial, sales, executive and administrative activities.

<sup>2</sup>Proportion of employees in establishments reporting specific provisions to the total number of employees in all reporting establishments.

<sup>3</sup>Legislation in all jurisdictions in Canada entitle employees to at least 2 weeks annual vacation with pay generally after 1 year of employment.

## 5.25 Average wage and salary rates for selected occupations for certain metropolitan areas and cities<sup>1,2</sup>

Occupation	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
	Halifax-Dartmouth NS				Saint John NB				Montréal Que.			
MAINTENANCE TRADES	\$ an hour											
MALE												
Carpenter	7.65	8.05	8.41	9.92	7.14	8.37	8.60	10.51	7.86	8.68	9.76	11.03
Electrical repairman	8.62	9.21	9.83	11.29	8.83	10.40	11.43	13.08	8.63	9.46	10.49	11.96
Machinist	8.79	9.39	9.16	11.06	8.04	9.35	9.77	11.47	8.41	9.37	10.36	11.89
Millwright	8.37	8.84	10.29	11.28	9.39	11.16	11.87	13.81	8.69	9.70	10.75	11.95
Pipefitter	8.54	9.29	10.19	11.58	9.74	11.41	11.77	13.25	8.67	9.60	10.37	12.22
Tool and die maker	—	—	—	10.58	—	—	—	—	8.34	9.27	10.25	11.29
Welder	8.57	9.34	8.94	9.90	9.06	10.82	11.40	13.85	8.22	9.29	10.09	11.39
SERVICE OCCUPATIONS	\$ an hour											
MALE												
Truck driver, light	6.14	6.96	7.46	7.94	6.16	6.80	7.58	8.91	6.46	7.10	7.97	9.17
Truck driver, heavy	6.45	6.76	7.91	8.90	7.07	7.96	8.39	9.45	7.69	8.76	9.77	10.74
Industrial truck operator	7.05	8.92	8.96	9.59	8.16	9.23	9.89	11.54	7.33	8.25	9.46	10.38
Labourer, non-production	6.18	6.43	7.32	8.09	6.39	7.36	7.77	8.52	6.39	7.19	7.95	9.04
OFFICE OCCUPATIONS	\$ a week											
Accounting clerk												
senior, male	227	242	290	341	307	337	375	432	291	313	344	374
senior, female	220	236	269	302	216	227	263	308	239	265	296	331
Bookkeeper												
senior, male	310	345	372	429	291	347	407	448	344	366	418	453
senior, female	240	254	286	327	245	286	316	373	271	289	335	362

5.25 Average wage and salary rates for selected occupations for certain metropolitan areas and cities<sup>1,2</sup> (continued)

Occupation	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
	Halifax-Dartmouth NS				Saint John NB				Montréal Que.			
OFFICE OCCUPATIONS	\$ a week											
Clerk, general office												
junior, male	175	199	217	233	196	239	218	267	195	237	247	281
junior, female	164	181	206	233	162	185	213	239	183	204	230	253
intermediate, male	223	234	274	317	247	283	325	361	246	276	310	347
intermediate, female	206	214	257	291	207	229	257	302	223	248	285	319
senior, male	278	283	339	387	316	335	352	420	301	328	368	423
senior, female	247	254	310	349	248	264	306	359	257	284	327	370
Draughtsman, senior, male	372	379	433	479	343	426	528	616	381	412	464	524
Office manager												
male	382	425	473	525	384	429	467	520	408	445	536	582
female	329	358	402	451	315	353	363	419	347	369	436	486
Secretary												
junior, female	209	224	269	293	209	240	271	315	228	253	287	326
senior, female	245	266	306	338	246	271	303	345	262	292	329	368
Stenographer, senior, female	198	214	253	281	213	233	264	322	230	253	286	321
Telephone operator, female	175	197	212	244	192	206	225	272	197	222	250	279
Typist												
junior, female	165	177	205	228	179	204	226	280	182	201	221	258
senior, female	185	204	237	263	181	213	229	274	199	226	253	279
	Ottawa-Hull Ont. Que.				Toronto Ont.				Winnipeg Man.			
MAINTENANCE TRADES	\$ an hour											
MALE												
Carpenter	8.14	8.88	9.54	10.77	8.13	8.75	9.92	10.85	7.75	8.53	9.33	11.21
Electrical repairman	9.13	9.67	10.95	12.41	9.04	9.73	10.77	12.02	8.69	9.68	10.53	12.44
Machinist	8.92	8.88	10.03	12.01	8.67	9.41	10.32	11.55	8.43	9.22	10.02	11.91
Millwright	9.18	10.21	11.88	13.22	9.08	10.02	11.11	12.15	8.54	9.43	10.97	12.39
Pipefitter	8.94	9.97	11.32	13.11	9.01	9.95	10.87	12.45	8.49	9.14	9.96	12.18
Tool and die maker	7.17	8.47	-	10.56	9.30	10.39	11.51	12.51	8.42	8.96	10.49	11.71
Welder	9.06	10.21	11.31	11.34	8.23	8.83	9.74	10.99	8.17	8.94	9.86	11.68
SERVICE OCCUPATIONS	\$ an hour											
MALE												
Truck driver, light	6.83	6.58	7.42	8.30	6.68	7.19	7.91	9.15	6.59	6.89	8.16	9.45
Truck driver, heavy	7.86	8.27	9.33	10.11	7.81	8.57	9.71	10.78	7.60	7.92	9.16	10.49
Industrial truck operator	7.79	8.19	9.82	10.68	7.28	8.00	9.14	10.14	7.06	7.64	8.69	9.69
Labourer, non-production	6.61	7.03	7.71	8.56	6.75	6.83	8.32	8.64	6.10	6.24	7.55	8.81
OFFICE OCCUPATIONS	\$ a week											
Accounting clerk												
senior, male	299	323	346	382	289	315	345	397	305	330	374	400
senior, female	244	267	300	343	236	259	290	325	257	277	313	331
Bookkeeper												
senior, male	323	360	456	457	339	372	412	451	305	351	382	430
senior, female	271	289	299	379	259	286	324	360	234	277	310	348
Clerk, general office												
junior, male	185	203	233	270	196	227	230	266	202	250	244	272
junior, female	179	201	233	261	177	198	218	244	172	194	219	247
intermediate, male	225	229	279	312	235	258	291	327	245	277	298	348
intermediate, female	224	230	280	314	220	237	268	301	213	229	263	299
senior, male	270	275	335	377	295	320	357	401	289	315	350	405
senior, female	263	269	329	370	259	281	320	359	240	259	297	341
Draughtsman, senior, male	378	389	443	497	390	432	484	546	361	393	450	489
Office manager												
male	386	433	494	565	413	453	519	569	403	447	470	536
female	367	403	445	472	344	366	414	466	326	344	401	431
Secretary												
junior, female	221	245	275	308	222	245	273	305	208	230	255	285
senior, female	267	294	330	366	259	288	322	360	244	267	295	334
Stenographer, senior, female	220	244	278	316	229	251	282	319	233	251	276	308
Telephone operator, female	193	215	240	272	193	210	229	254	181	200	219	234
Typist												
junior, female	184	205	227	260	170	198	218	248	178	197	229	252
senior, female	191	216	237	262	203	226	251	285	203	227	254	277

### 5.25 Average wage and salary rates for selected occupations for certain metropolitan areas and cities<sup>1,2</sup> (concluded)

Occupation	1979	1980	1981	1982	1979	1980	1981	1982	1979	1980	1981	1982
	Regina Sask.				Edmonton Alta.				Vancouver BC			
MAINTENANCE TRADES	\$ an hour											
MALE	8.75	9.15	10.88	12.60	9.61	10.37	11.68	13.28	10.06	11.33	13.08	14.22
Carpenter	9.63	10.22	13.34	13.65	10.23	11.11	12.92	14.64	10.80	11.82	13.42	14.88
Electrical repairman	8.53	9.91	12.69	11.79	9.34	10.60	12.03	13.14	10.23	11.55	13.00	14.91
Machinist	9.63	8.92	12.74	12.58	9.83	11.53	13.35	14.58	10.99	11.90	13.95	15.17
Millwright	9.69	8.90	—	—	9.80	10.68	12.49	14.19	10.49	11.25	12.85	14.57
Pipefitter	—	—	—	—	10.45	—	12.10	—	10.70	11.74	13.39	14.85
Tool and die maker	—	—	—	—	—	—	—	—	—	—	—	—
Welder	9.15	9.55	13.06	12.28	9.49	10.87	12.39	13.91	10.49	11.66	13.28	14.85
SERVICE OCCUPATIONS	\$ an hour											
MALE	6.97	7.43	8.83	9.85	6.95	8.08	8.73	10.05	8.20	8.89	10.34	12.03
Truck driver, light	7.06	7.79	9.50	10.88	7.99	8.87	9.89	11.88	9.40	10.11	11.82	13.15
Truck driver, heavy	7.24	7.46	9.05	8.97	7.73	8.41	9.80	10.81	9.74	10.60	12.21	12.97
Industrial truck operator	6.68	6.46	8.39	9.54	7.05	7.48	8.42	9.53	8.07	8.75	10.22	13.39
Labourer, non-production	—	—	—	—	—	—	—	—	—	—	—	—
OFFICE OCCUPATIONS	\$ a week											
Accounting clerk	268	314	351	392	280	324	376	430	315	342	395	420
senior, male	258	273	312	363	239	281	313	357	273	301	340	371
senior, female	—	—	—	—	—	—	—	—	—	—	—	—
Bookkeeper	309	344	405	442	367	451	440	450	362	405	456	506
senior, male	252	274	328	369	261	309	365	388	300	330	382	402
senior, female	—	—	—	—	—	—	—	—	—	—	—	—
Clerk, general office	181	197	245	289	196	264	239	268	210	247	266	301
junior, male	183	198	235	278	186	217	243	266	208	229	262	290
junior, female	223	255	277	344	242	313	301	317	251	275	309	341
intermediate, male	217	230	277	308	215	252	267	294	244	259	297	336
intermediate, female	275	300	346	401	301	350	360	421	310	335	389	429
senior, male	250	266	314	358	256	298	313	354	280	298	344	383
senior, female	375	402	450	510	409	435	503	560	425	460	523	582
Draughtsman, senior, male	—	—	—	—	—	—	—	—	—	—	—	—
Office manager	384	376	469	575	383	410	441	493	426	457	555	585
male	285	315	378	452	303	342	366	408	359	383	430	477
female	—	—	—	—	—	—	—	—	—	—	—	—
Secretary	235	251	296	348	239	261	302	360	255	274	308	341
junior, female	272	290	334	381	268	293	348	384	283	313	353	391
senior, female	235	249	284	337	219	263	314	353	253	279	306	339
Stenographer, senior, female	206	212	249	281	189	229	239	265	230	249	281	310
Telephone operator, female	—	—	—	—	—	—	—	—	—	—	—	—
Typist	191	205	242	294	202	201	244	278	204	221	255	387
junior, female	224	236	281	325	231	246	282	313	231	255	282	313
senior, female	—	—	—	—	—	—	—	—	—	—	—	—

<sup>1</sup>Oct. 1, each year.

<sup>2</sup>The rates cover all major industries except agriculture, fishing, hunting, trapping, construction, and the non-logging part of forestry.

### 5.26 Private pension plans, members and contributions by funding agency

Funding agency	January 1, 1980		1979 Contributions		
	Plans	Members	Employees \$'000	Employer \$'000	Total \$'000
Insurance companies	10,467	591,058	246,306	480,860	727,166
Canadian government annuities	53	267	79	74	153
Trusteed	3,835	3,000,283	1,550,176	3,287,445	4,837,621
Combination of above	205	164,326	58,125	259,848	317,973
Government consolidated revenue funds	24	719,488	756,608	945,039	1,701,647
Other	2	7	10	52	62
Total	14,586	4,475,429	2,611,304	4,973,318	7,584,622
Funding agency	January 1, 1982		1981 Contributions		
	Plans	Members	Employees \$'000	Employer \$'000	Total \$'000
Insurance companies	10,623	619,609	292,407	613,243	910,650
Canadian government annuities	38	141	52	47	99
Trusteed	4,331	3,181,365	2,028,636	3,896,670	5,925,306
Combination of above	221	170,333	75,427	320,609	396,036
Government consolidated revenue funds	19	686,487	857,793	1,303,372	2,161,165
Total	15,232	4,657,935	3,259,315	6,133,941	9,393,256

**5.27 Trusteed pension funds, income expenditures and assets**

Item	1979	1980	1981
TRUST ARRANGEMENTS	No.	No.	No.
(a) Corporate trustees	2,525	2,550	2,573
(b) Individual trustees	656	654	742
(c) Combinations of (a) and (b)	47	38	37
(d) Pension fund societies	17	14	12
Total trusteed funds	3,245	3,256	3,364
INCOME	\$'000,000	\$'000,000	\$'000,000
Total contributions	5,013	5,532	6,021
Employer	3,429	3,758	3,915
Employee	1,584	1,774	2,106
Investment income	3,368	4,246	5,491
Realized profit on sale of securities	796	1,076	784
Miscellaneous	46	129	62
Total income	9,223	10,983	12,358
EXPENDITURES			
Pension payments out of funds	1,625	1,884	2,212
Cost of pension purchased	70	84	99
Cash withdrawals	333	402	446
Administration costs	62	72	87
Realized loss on sale of securities	10	25	116
Other expenditures	48	28	12
Total expenditures	2,148	2,495	2,972
ASSETS (book value)			
Investment in pooled pension funds of trust companies	1,926	2,133	2,423
Investment in mutual funds	277	394	508
Investment in segregated funds of insurance companies	748	932	1,027
Bonds	21,136	25,399	28,598
Bonds of, or guaranteed by, Government of Canada	3,831	5,510	6,433
Bonds of, or guaranteed by, provincial governments	10,651	12,423	13,852
Bonds of Canadian municipal governments, school boards	1,441	1,578	1,776
Other Canadian bonds	5,199	5,867	6,499
Non-Canadian bonds	14	21	38
Stocks	8,016	10,560	13,384
Canadian, common	6,361	8,216	10,371
Canadian, preferred	91	263	397
Non-Canadian, common	1,558	2,079	2,614
Non-Canadian, preferred	6	2	2
Mortgages	5,359	5,757	6,204
Insured residential (NHA)	2,917	3,081	3,286
Conventional	2,442	2,676	2,918
Real estate and lease-backs	410	561	815
Miscellaneous	5,295	5,949	8,555
Cash on hand and in chartered banks	1,229	1,910	2,623
Guaranteed investment certificates	346	309	485
Other short-term investments	2,793	2,608	4,127
Accrued interest and dividends receivable	517	667	913
Accounts receivable	398	426	384
Other assets	12	29	23
Total assets	43,203	51,685	61,514

5.28 Fatal occupational injuries and illnesses<sup>1</sup>

Industry	Number				Percentage of total			
	1978	1979	1980	1981	1978	1979	1980	1981
Agriculture	7	14	7	17	0.7	1.3	0.7	1.8
Forestry	85	106	76	60	8.5	10.0	7.3	6.3
Fishing and trapping	15	15	22	20	1.5	1.4	2.1	2.1
Mining, quarrying and oil wells	116	141	168	126	11.7	13.3	16.1	13.1
Manufacturing	183	163	140	146	18.4	15.4	13.5	15.2
Construction	165	178	182	174	16.6	16.8	17.5	18.1
Transportation, communication and other utilities	205	212	220	198	20.6	20.0	21.1	20.6
Trade	64	66	73	60	6.4	6.2	7.0	6.3
Finance, insurance and real estate	6	5	8	9	0.6	0.5	0.8	0.9
Service	55	75	86	83	5.5	7.1	8.3	8.6
Public administration	77	63	44	62	7.7	6.0	4.2	6.5
Unspecified	17	21	15	5	1.7	2.0	1.4	0.5
Total	995	1,059	1,041	960	100.0	100.0	100.0	100.0

Data derived from unprocessed fatality claims reported by worker compensation boards. They may differ from fatality claims in Table 5.29, which have been processed by compensation.

## 5.29 Compensation claims and payments made for occupational injuries and illnesses

Year and province	Compensation claims				Workers' compensation, payments <sup>2</sup> \$'000
	Medical aid only <sup>1</sup>	Non-fatal disabling injury and illnesses	Fatal injury and illnesses <sup>2</sup>	Total disabling injury and illnesses	
1979					
Newfoundland	6,615	6,836	7	6,843	12,354
Prince Edward Island	1,688	1,872	6	1,878	2,598
Nova Scotia	20,755	12,713	45	12,758	29,033
New Brunswick	15,568	10,459	24	10,483	21,072
Quebec	152,361	174,012	176	174,188	298,726
Ontario	247,552	165,244	276	165,520	431,175
Manitoba	17,411	19,300	37	19,337	24,578
Saskatchewan	21,441	16,951	42	16,993	35,640
Alberta	76,857	50,126	156	50,282	86,431
British Columbia	67,614	77,074	163	77,237	159,816
Yukon <sup>4</sup>	1,015 <sup>e</sup>	759 <sup>c</sup>	4	763	1,327
Northwest Territories	1,348	888	8	896	2,067
Total, 1979	630,255	536,234	944	537,178	1,167,403
1980					
Newfoundland	5,057	7,128	13	7,141	14,905
Prince Edward Island	1,543	1,829	10	1,839	2,690
Nova Scotia	19,599	13,546	24	13,570	34,191
New Brunswick	13,825	12,184	26	12,210	24,863
Quebec	157,255	189,512	170	189,682	366,923
Ontario	246,255	164,949	272	165,221	526,998
Manitoba	17,898	21,227	38	21,265	28,261
Saskatchewan	20,743	17,669	58	17,727	39,656
Alberta	88,743	52,092	169	52,261	109,668
British Columbia	74,646	85,171	177	85,348	200,975
Yukon <sup>4</sup>	991	742	6	748	1,698
Northwest Territories	1,717	900	9	909	2,209
Total, 1980	648,272	566,949	972	567,921	1,216,193
1981					
Newfoundland	6,736	6,810	35	6,845	18,072
Prince Edward Island	1,516	1,631	1	1,632	2,786
Nova Scotia	19,529	14,572	39	14,611	38,823
New Brunswick	12,789	12,919	22	12,941	28,059
Quebec	152,626	201,748	159	201,907	465,101
Ontario	222,374	163,131	235	163,366	620,513
Manitoba	18,847	20,184	29	20,213	33,883

### 5.29 Compensation claims and payments made for occupational injuries and illnesses (concluded)

Year and province	Compensation claims					Workers' compensation payments <sup>3</sup> '000
	Medical aid only <sup>1</sup>	Non-fatal disabling injury and illnesses	Fatal injury and illnesses <sup>2</sup>	Total disabling injury and illnesses	Total injuries and illnesses	
Saskatchewan	21,334	18,621	76	18,697	40,031	49,903
Alberta	88,616	56,818	161	56,979	145,595	133,032
British Columbia	74,955	86,067	197	86,264	161,219	232,319
Yukon <sup>4</sup>	989	737	6	743	1,732	2,012
Northwest Territories	1,897	1,205	7	1,212	3,109	2,787
Total, 1981	622,208	584,443	967	585,410	1,207,618	1,627,290

<sup>1</sup>Injuries requiring medical treatment but not causing disability for a period sufficient to qualify for compensation, the period varies among provinces.

<sup>2</sup>See footnote Table 5.28.

<sup>3</sup>Except where noted otherwise, includes only payments to compensate loss of earnings, medical aid payments, cost of rehabilitation and hospitalization (not including capital expenditures), and pensions paid (not pensions awarded) for temporary and permanent disabilities.

<sup>4</sup>Claims reported.

### 5.30 Unemployment insurance claims and average payments

Year, month and end of period	Activity				
	Insured population <sup>1</sup> '000	Claims data ('000)		Benefit data	
		Beneficiaries <sup>1, 2</sup>	Initial and renewal claims received	Number of weeks '000	Average weekly payment \$
1979	9,985	713	2,600	36,896	108.63
1980	10,329	703	2,762	36,333	120.92
1981	10,617	720	2,947	37,011	130.45
1982	10,648	1,138	3,919	60,441	144.60 <sup>3</sup>
1979					
January	9,648	945	308	4,667	112.70
February	9,662	975	198	3,958	108.09
March	9,744	948	193	3,979	107.95
April	9,749	881	189	3,817	108.09
May	9,960	743	197	3,603	106.73
June	10,134	643	173	2,661	105.11
July	10,371	588	196	2,677	104.77
August	10,395	580	165	2,513	105.97
September	10,007	500	180	2,059	107.46
October	10,096	511	227	2,365	109.60
November	10,082	576	302	2,224	111.61
December	9,975	679	274	2,373	114.79
1980					
January	9,962	825	340	3,967	118.40
February	10,012	854	217	3,465	120.94
March	10,076	840	190	3,617	121.37
April	10,100	814	211	3,680	121.14
May	10,321	719	199	3,055	120.33
June	10,590	623	183	2,787	119.40
July	10,721	604	228	2,707	118.57
August	10,730	612	181	2,498	119.47
September	10,383	558	188	2,359	120.36
October	10,407	580	240	2,470	122.12
November	10,349	649	282	2,563	123.14
December	10,292	754	303	3,165	125.99
1981					
January	10,253	874	306	3,776	129.02
February	10,353	881	206	3,633	131.07
March	10,412	863	199	4,043	131.18
April	10,394	800	192	3,513	130.46
May	10,655	688	167	2,910	129.07
June	10,913	582	183	2,776	127.41
July	11,039	576	242	2,354	126.54
August	11,045	597	184	2,460	127.30
September	10,669	569	257	2,701	129.64

### 5.30 Unemployment insurance claims and average payments (concluded)

Year, month and end of period	Activity				
	Insured population <sup>1</sup> '000	Claims data ('000)		Benefit data	
		Beneficiaries <sup>1, 2</sup>	Initial and renewal claims received	Number of weeks '000	Average weekly payment \$
October	10,652	622	288	2,530	131.61
November	10,564	712	352	2,829	133.26
December	10,453	880	372	3,488	136.48
1982					
January	10,352	1,078	385	4,509	139.80
February	10,370	1,130	257	4,570	141.57
March	10,493	1,146	297	5,556	141.91
April	10,470	1,175	280	4,904	141.88
May	10,711	1,098	265	4,793	141.71
June	10,908	1,033	309	4,868	141.89
July	11,065	1,038	326	4,418	142.46
August	11,014	1,101	276	5,039	143.66
September	10,646	1,072	345	4,943	146.13
October	10,647	1,135	355	4,855	148.52
November	10,581	1,251	438	5,967	150.18
December	10,518	1,395	388	6,018	152.87

<sup>1</sup>Annual figures are annual averages.

<sup>2</sup>Persons drawing \$1 or more of benefit for a particular week each month.

<sup>3</sup>Exclude work sharing and job creation in order to maintain comparability with previous data.

### 5.31 Unemployment insurance benefits by type (thousand dollars)

Year, month and end of period	Benefits paid								Total
	Regular	Sickness	Maternity	Retirement	Fishing	Training	Work sharing	Job creation	
1979	3,431,217	145,184	207,649	15,054	70,897	138,000	...	...	4,008,001
1980	3,748,552	154,670	234,746	15,950	82,571	156,819	...	...	4,393,308
1981	4,115,789	164,261	273,052	17,582	92,443	165,147	...	...	4,828,273
1982	7,646,025	174,416	315,972	18,167	111,857	202,129	83,154	23,726	8,575,445
1979									525,765
January	459,068	14,978	19,203	1,417	15,702	15,577	...	...	427,774
February	371,365	12,584	14,829	1,181	12,328	15,486	...	...	429,490
March	372,565	13,627	15,875	1,237	11,950	14,236	...	...	412,604
April	356,244	11,691	15,858	1,167	11,227	16,415	...	...	384,525
May	331,830	12,821	18,440	1,255	8,337	11,841	...	...	279,643
June	239,692	11,850	17,091	1,241	351	9,419	...	...	280,497
July	242,708	11,495	17,880	1,244	66	7,103	...	...	266,347
August	229,492	12,132	18,274	1,360	47	5,042	...	...	221,273
September	186,684	10,245	16,339	1,225	29	6,751	...	...	259,214
October	213,093	12,089	20,756	1,432	26	11,818	...	...	248,248
November	204,463	11,524	17,892	1,281	1,784	11,304	...	...	272,441
December	224,012	10,146	15,212	1,015	9,050	13,006	...	...	
1980									469,658
January	402,834	14,185	20,658	1,506	15,864	14,612	...	...	419,089
February	359,089	12,720	16,558	1,358	13,628	15,736	...	...	438,958
March	374,389	13,681	17,347	1,291	14,292	17,958	...	...	445,845
April	381,794	13,740	19,276	1,368	13,975	15,692	...	...	367,586
May	314,222	12,871	18,664	1,364	7,828	12,637	...	...	332,798
June	285,277	12,435	19,221	1,363	281	14,221	...	...	321,024
July	277,858	13,274	20,780	1,278	56	7,778	...	...	298,440
August	259,288	11,820	19,074	1,324	34	6,839	...	...	283,870
September	244,339	11,581	19,651	1,163	44	7,092	...	...	301,640
October	253,449	12,314	21,812	1,308	68	12,689	...	...	315,593
November	261,375	12,794	21,586	1,440	2,123	16,276	...	...	398,806
December	334,637	13,196	20,119	1,187	14,377	15,288	...	...	
1981									487,168
January	419,632	13,936	21,336	1,527	16,821	13,918	...	...	476,126
February	407,516	13,480	19,336	1,472	16,361	17,961	...	...	530,297
March	451,917	15,260	22,149	1,529	18,239	21,204	...	...	458,314
April	388,957	14,473	21,869	1,382	15,129	16,504	...	...	375,551
May	315,634	12,983	21,393	1,457	8,847	15,238	...	...	353,685
June	301,029	14,255	23,522	1,532	388	12,959	...	...	297,804
July	254,633	13,146	20,918	1,326	70	7,711	...	...	313,107
August	271,204	11,865	21,921	1,431	85	6,601	...	...	

**5.31 Unemployment insurance benefits by type (thousand dollars) (concluded)**

Year, month and end of period	Benefits paid								Total
	Regular	Sickness	Maternity	Retirement	Fishing	Training	Work sharing	Job creation	
September	298,635	14,098	28,499	1,509	114	7,357	...	...	350,208
October	279,020	13,702	25,222	1,608	100	13,375	...	...	333,026
November	318,161	13,064	23,744	1,459	2,435	18,128	...	...	376,991
December	409,450	14,000	23,145	1,350	13,855	14,196	...	...	475,996
1982									
January	554,406	14,189	23,882	1,385	18,762	17,751	...	...	630,376
February	568,762	14,362	22,437	1,598	18,780	20,966	50	...	646,956
March	695,837	17,503	26,277	1,699	23,432	21,217	853	...	786,817
April	610,579	14,846	25,221	1,305	17,941	18,918	2,264	...	691,074
May	595,098	14,148	25,604	1,241	10,664	19,556	4,397	14	670,722
June	605,958	14,606	27,151	1,879	440	16,020	8,101	254	674,408
July	550,111	13,462	26,760	1,343	110	10,017	8,917	478	611,198
August	651,776	13,597	28,108	1,554	80	9,128	6,502	1,564	712,310
September	635,450	14,005	29,147	1,604	79	9,816	10,211	2,778	703,088
October	616,530	13,628	26,693	1,477	88	17,905	13,092	4,329	693,742
November	770,919	15,394	28,812	1,680	3,621	20,214	15,320	6,732	862,692
December	790,597	14,675	25,881	1,401	17,860	20,623	13,448	7,578	892,062

**5.32 Average incomes of families in current and constant (1971) dollars, selected years**

Region	1961	1971	1975	1977	1979	1981
Current dollars						
Atlantic provinces	4,156	7,936	13,474	16,590	19,525	24,659
Quebec	5,294	9,919	15,446	19,056	23,400	28,124
Ontario	5,773	11,483	18,047	21,600	25,298	32,170
Prairie provinces	4,836	9,309	16,177	19,712	24,179	31,723
British Columbia	5,491	11,212	17,746	21,040	26,644	32,835
Canada	5,317	10,368	16,613	20,101	24,245	30,440
Constant dollars						
Atlantic provinces	5,544	7,936	9,728	10,319	10,212	10,406
Quebec	7,062	9,919	11,152	11,853	12,238	11,868
Ontario	7,701	11,483	13,030	13,435	13,231	13,576
Prairie provinces	6,451	9,309	11,680	12,261	12,646	13,387
British Columbia	7,325	11,212	12,813	13,087	13,935	13,856
Canada	7,093	10,368	11,994	12,503	12,680	12,846

**5.33 Percentage distribution of families, showing average and median<sup>1</sup> incomes, in constant (1971) dollars, selected years**

Income group	1969	1971	1975	1977	1979	1981
Under \$3,000	9.6	9.0	5.5	5.8	5.4	4.5
\$ 3,000 - \$ 4,999	13.0	11.5	10.1	9.4	9.6	9.1
5,000 - 6,999	14.6	12.2	9.5	8.7	8.7	9.3
7,000 - 9,999	25.2	22.0	18.8	16.6	16.1	16.8
10,000 - 11,999	13.0	14.0	13.2	12.6	12.3	11.8
12,000 - 14,999	11.5	14.2	16.3	16.1	16.6	16.3
15,000 - 19,999	8.1	10.9	15.8	17.4	17.9	17.9
20,000 and over	4.9	6.2	10.7	13.6	13.6	14.4
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$ 9,490	10,368	11,994	12,503	12,680	12,846
Median income	\$ 8,465	9,347	10,881	11,540	11,672	11,749

<sup>1</sup>Median income refers to the middle or central value when incomes are ranged in order of magnitude. Median income is lower than average income in these tables since it is not as affected by a few abnormally large values in the distribution.

### 5.34 Percentage distribution of families by income group and region, 1981

Income group	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Canada
Under \$10,000	14.8	11.4	7.3	9.3	7.8	9.4
\$10,000 - \$14,999	14.5	10.7	8.8	10.7	10.2	10.3
15,000 - 19,999	14.9	13.1	9.8	10.0	9.0	11.1
20,000 - 24,999	13.8	13.6	11.6	10.8	9.5	12.0
25,000 - 29,999	12.7	12.7	13.3	11.9	12.1	12.7
30,000 - 34,999	9.6	10.9	12.0	11.5	9.7	11.1
35,000 - 39,999	6.7	9.0	10.7	9.1	12.4	9.8
40,000 - 44,999	4.1	5.5	7.5	7.0	7.3	6.6
45,000 and over	8.8	13.0	18.9	19.7	22.0	17.0
Total	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$ 24,659	28,124	32,170	31,723	32,835	30,440
Median income	\$ 22,060	25,465	29,669	28,861	30,702	27,838

### 5.35 Percentage distribution of families by income group, age and sex of head, 1981

Income group	Age of head							
	Under 25	25-34	35-44	45-54	55-64	65-69	70 and over	All age groups
<b>Families with male heads</b>								
Under \$10,000	10.2	4.1	3.5	4.3	8.4	16.0	19.0	6.7
\$10,000 - \$14,999	11.2	6.5	5.0	5.2	7.9	25.0	38.6	9.6
15,000 - 19,999	17.3	11.0	7.6	7.4	11.8	15.7	15.5	10.6
20,000 - 24,999	18.6	14.8	11.2	9.7	11.4	10.9	9.0	12.1
25,000 - 29,999	16.7	17.5	13.9	10.5	11.6	4.7	5.9	13.2
30,000 - 34,999	10.5	15.0	13.9	11.9	10.4	9.1	3.4	11.9
35,000 - 39,999	8.9	11.6	12.7	11.3	10.6	5.5	3.2	10.6
40,000 - 44,999	2.5	8.3	8.4	9.2	6.1	3.6	1.2	7.1
45,000 and over	4.1	11.2	23.8	30.6	21.7	9.5	4.2	18.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$ 23,879	30,190	35,581	38,715	32,753	23,117	18,162	31,884
Median income	\$ 23,068	28,877	33,183	35,447	29,512	17,591	13,434	29,228
<b>Families with female heads</b>								
Under \$10,000	68.9	49.0	23.7	19.7	22.6	24.5	24.4	32.7
\$10,000 - \$14,999	15.3	19.4	16.4	13.5	12.5	19.6	18.6	16.3
15,000 - 19,999	4.7	16.2	19.3	17.2	17.5	15.5	11.3	15.7
20,000 - 24,999	3.5	7.1	16.4	13.7	11.7	8.8	11.4	11.1
25,000 - 29,999	4.8	4.9	10.3	12.8	9.9	7.9	10.5	8.9
30,000 - 34,999	1.4	1.8	4.6	6.1	10.3	5.6	6.0	4.9
35,000 - 39,999	0.2	0.4	4.1	5.8	6.2	6.6	5.0	3.7
40,000 - 44,999	0.0	0.6	2.6	3.1	3.9	3.4	1.1	2.1
45,000 and over	1.4	0.8	2.6	8.2	5.4	8.1	11.8	4.7
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$ 9,513	12,337	19,237	22,459	22,180	21,763	22,675	18,264
Median income	\$ 6,709	10,238	18,074	19,855	19,360	17,029	18,351	15,413
<b>All families</b>								
Under \$10,000	18.5	8.4	5.6	5.9	9.8	16.9	19.7	9.4
\$10,000 - \$14,999	11.9	7.7	6.1	6.0	8.3	24.4	35.7	10.3
15,000 - 19,999	15.1	11.5	8.8	8.4	12.3	15.7	14.9	11.1
20,000 - 24,999	16.1	14.0	11.7	10.1	11.5	10.7	9.3	12.0
25,000 - 29,999	14.7	16.3	13.6	10.7	11.4	9.0	6.6	12.7
30,000 - 34,999	9.0	13.7	13.0	11.3	10.4	4.8	3.8	11.1
35,000 - 39,999	7.4	10.5	11.8	10.7	10.2	5.6	3.5	9.9
40,000 - 44,999	2.1	7.5	7.8	8.6	5.9	3.5	1.2	6.6
45,000 and over	3.7	10.3	21.6	28.3	20.2	9.3	5.3	17.0
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Average income	\$ 21,452	28,497	33,881	37,104	31,754	22,978	18,830	30,440
Median income	\$ 20,925	27,557	31,615	33,957	28,548	17,507	13,778	27,838

### 5.36 Estimated incidence and percentage distribution of low-income<sup>1</sup> and all other families and unattached individuals, 1981

Selected characteristics	Families			Unattached individuals		
	Incidence of low income <sup>2</sup>	Percentage distribution of		Incidence of low income <sup>2</sup>	Percentage distribution of	
		Low-income	All other		Low-income	All other
All families and unattached individuals	12.0	100.0	100.0	37.8	100.0	100.0
Estimated numbers '000	..	768	5,650	..	962	1,582
By province of residence						
Atlantic provinces	16.6	12.0	8.2	43.3	7.2	5.7
Newfoundland	17.4	3.0	2.0	42.7	1.1	0.9
Prince Edward Island	15.0	0.6	0.5	46.1	0.5	0.3
Nova Scotia	15.4	4.2	3.2	42.9	3.3	2.7
New Brunswick	17.6	4.1	2.6	43.7	2.3	1.8
Quebec	14.8	33.0	25.9	48.5	32.7	21.1
Ontario	9.9	29.9	36.8	34.3	31.3	36.5
Prairie provinces	11.3	16.2	17.3	31.0	16.1	21.8
Manitoba	14.5	5.0	4.0	37.4	4.4	4.5
Saskatchewan	14.9	4.8	3.7	37.1	4.0	4.1
Alberta	8.3	6.4	9.6	26.2	7.7	13.2
British Columbia	9.4	9.0	11.8	34.1	12.7	14.9
By size of area of residence						
Urban areas 500,000 and over	11.2	39.4	42.3	38.9	54.3	51.9
Urban areas 100,000 - 499,999	12.1	14.7	14.5	35.5	14.8	16.3
Urban areas 30,000 - 99,999	12.5	8.7	8.2	38.8	8.4	8.0
Urban areas under 30,000	12.1	15.8	15.5	38.4	14.2	13.9
Rural areas	13.1	21.5	19.5	33.8	8.3	9.9
By tenure						
Owners	8.0	48.1	75.5	32.2	21.6	27.7
With mortgage	6.1	21.2	4.4	16.5	3.5	10.8
Without mortgage	10.5	26.9	31.1	39.5	18.1	16.9
Renters <sup>3</sup>	22.3	51.9	24.5	39.7	78.4	72.3
By age of head						
24 years and under	22.7	10.6	4.9	38.4	19.7	19.1
25-34 years	12.6	26.5	25.0	18.2	10.8	29.6
35-44 "	10.7	20.2	23.0	22.4	5.4	11.4
45-54 "	9.0	14.1	19.4	30.3	6.7	9.4
55-64 "	10.5	13.3	15.5	40.9	13.0	11.4
65-69 "	15.6	7.0	5.1	50.2	9.8	5.9
70 years and over	13.6	8.2	7.1	61.6	34.6	13.1
By sex of head						
Male	8.9	66.2	92.5	28.5	33.0	50.3
Female	38.1	33.8	7.5	45.0	67.0	49.7
By marital status of head						
Single	34.7	8.9	2.3	30.9	44.5	60.6
Married	8.8	64.3	90.2	32.1	3.3	4.2
Other	32.7	26.8	7.5	47.4	52.2	35.2
By employment status of head						
In labour force	7.9	52.3	82.8	20.4	32.5	77.0
Not in labour force	27.3	47.7	17.2	64.1	67.5	23.0
By size of family unit						
One person	...	...	...	37.8	100.0	100.0
Two persons	12.5	39.0	35.7	...	...	...
Three persons	12.7	24.5	22.5	...	...	...
Four persons	9.7	19.7	24.8	...	...	...
Five or more persons	13.2	16.8	17.0	...	...	...

<sup>1</sup>Estimates based on low-income cutoffs, 1978 base, as described in preceding text.

<sup>2</sup>Percentage of families and unattached individuals with income below the low-income cutoffs.

<sup>3</sup>Includes roomers, lodgers and families and unattached individuals who receive free lodging or who reside with employers.

## 5.37 Patterns of expenditure for families of two or more persons

Item		1969	1978
Family characteristics			
Average family size	No.	3.83	3.35
Children under 5	"	0.38	0.28
Children 5-15	"	1.03	0.70
Adults 16-17	"	0.16	0.14
Adults 18-64	"	2.08	2.05
Adults 65 and over	"	0.25	0.25
Full-time earners	"	0.90	0.89
Age of head	yr	45.4	44.9
Income before taxes	\$	9,031	21,694
Other money receipts	\$	205	720
Net change in assets and liabilities	\$	168	1,088
Percentage			
Homeowners		65.1	70.5
Car or truck owners		80.9	86.3
Average total expenditure	\$	9,160	21,320
Percentage of total expenditure			
Food		18.8	16.6
Shelter		14.8	15.2
Rented living quarters		4.4	3.4
Owned living quarters		6.5	7.7
Other accommodation		0.8	0.8
Water and fuel		3.2	3.3
Household operation		4.0	3.8
Household furnishings and equipment		4.8	4.9
Household appliances		1.2	1.1
Other		3.5	3.9
Clothing		8.3	6.9
Personal care		2.1	1.7
Medical and health care		3.4	1.9
Tobacco and alcoholic beverages		3.7	3.1
Transportation		13.1	14.0
Automobile and truck		10.9	11.6
Purchase		5.0	5.4
Operation		5.9	6.1
Other transportation		2.2	2.4
Recreation		3.4	3.8
Reading		0.6	0.5
Education		0.9	0.7
Miscellaneous expenses		1.6	2.4
Total current consumption		79.5	75.4
Personal taxes		13.7	16.9
Security		4.4	5.4
Gifts and contributions		2.4	2.3
Total expenditure		100.0	100.0

5.38 Patterns of expenditure for families, by income quintile groups<sup>1</sup>, 1978

Item		First quintile	Second quintile	Third quintile	Fourth quintile	Fifth quintile	All classes
Family characteristics							
Average family size	No.	2.60	3.22	3.51	3.62	3.82	3.35
Children under 5	"	0.19	0.36	0.37	0.32	0.17	0.28
Children 5-15	"	0.40	0.67	0.82	0.82	0.80	0.70
Adults 16-17	"	0.09	0.11	0.14	0.16	0.23	0.14
Adults 18-64	"	1.23	1.97	2.15	2.29	2.60	2.05
Adults 65 and over	"	0.75	0.22	0.11	0.10	0.08	0.25
Full-time earners	"	0.19	0.68	0.97	1.17	1.45	0.98
Age of head	yr	54.9	44.0	40.6	41.0	44.3	44.9
Income before taxes	\$	7,866.3	14,653.3	19,886.6	25,897.1	40,165.2	21,693.7
Other money receipts	\$	502.6	579.8	781.1	682.4	1,052.5	719.7
Net change in assets and liabilities	\$	-633.2	-98.2	791.8	1,663.6	5,190.4	1,382.9
Percentage							
Homeowners		56.9	61.9	70.2	77.0	86.6	70.5
Car or truck owners		65.4	86.0	91.4	95.0	93.9	86.3
Average total expenditure	\$	9,072.6	15,471.1	20,006.9	24,877.0	35,696.3	21,024.8
Percentage of total expenditure							
Food		24.7	19.7	17.5	16.1	13.7	16.8
Shelter		21.5	17.5	16.6	15.1	13.0	15.6
Rented living quarters		8.7	5.7	3.8	2.7	1.5	3.4
Owned living quarters		6.3	7.3	8.6	8.7	7.8	8.0
Other housing		0.4	0.6	0.7	0.8	1.2	0.8
Water, fuel and electricity		6.1	3.9	3.5	3.0	2.5	3.3
Household operation		5.6	4.5	4.2	3.9	3.5	4.1
Furnishings and equipment		4.9	4.7	4.8	4.7	4.3	4.6
Furniture		1.3	1.3	1.6	1.6	1.4	1.5
Household appliances		1.3	1.2	1.1	0.9	0.8	1.0
Other		2.3	2.1	2.1	2.2	2.1	2.1
Clothing		6.4	6.6	7.0	7.0	7.2	7.0
Personal care		1.9	1.8	1.7	1.6	1.5	1.6
Medical and health care		2.4	2.3	2.0	1.8	1.7	1.9
Smoking and alcoholic beverages		3.9	3.8	3.3	3.1	2.7	3.2
Travel and transportation		13.0	14.1	13.3	13.2	12.1	13.0
Automobile and truck		11.5	13.0	12.1	12.1	10.8	11.7
Purchase		4.8	5.8	5.4	5.6	5.5	5.5
Operation		6.7	7.2	6.7	6.4	5.3	6.2
Other		1.5	1.1	1.1	1.2	1.3	1.2
Recreation		3.6	4.6	4.9	5.2	5.4	5.0
Reading		0.6	0.6	0.5	0.5	0.5	0.5
Education		0.6	0.5	0.5	0.7	0.9	0.7
Miscellaneous expenses		2.3	2.8	2.5	2.3	2.3	2.4
Total current consumption		91.6	83.4	78.8	75.3	68.7	76.3
Personal taxes		3.4	10.9	15.0	18.1	23.8	17.1
Security		1.7	3.7	4.1	4.4	5.1	4.2
Gifts and contributions		3.3	2.0	2.1	2.2	2.4	2.3
Total expenditure		100.0	100.0	100.0	100.0	100.0	100.0

<sup>1</sup>Weighted survey records of families are arranged in ascending order by size of total income and divided into five equal groups, or quintiles. Thus, each group, or quintile, represents a weighted 20% of families.

## Sources

5.1 - 5.9 Labour Force Survey Division, Statistics Canada.

5.10 Public Affairs Division, Department of Employment and Immigration.

5.11, 5.12, 5.14 Work Stoppages Division, Department of Labour.

5.13 Communications Directorate, Department of Labour.

5.15 - 5.22, 5.26, 5.27, 5.30, 5.31 Labour Division, Statistics Canada.

5.23 - 5.25 Surveys Division, Department of Labour.

5.28, 5.29 Occupational Safety and Health Division, Department of Labour.

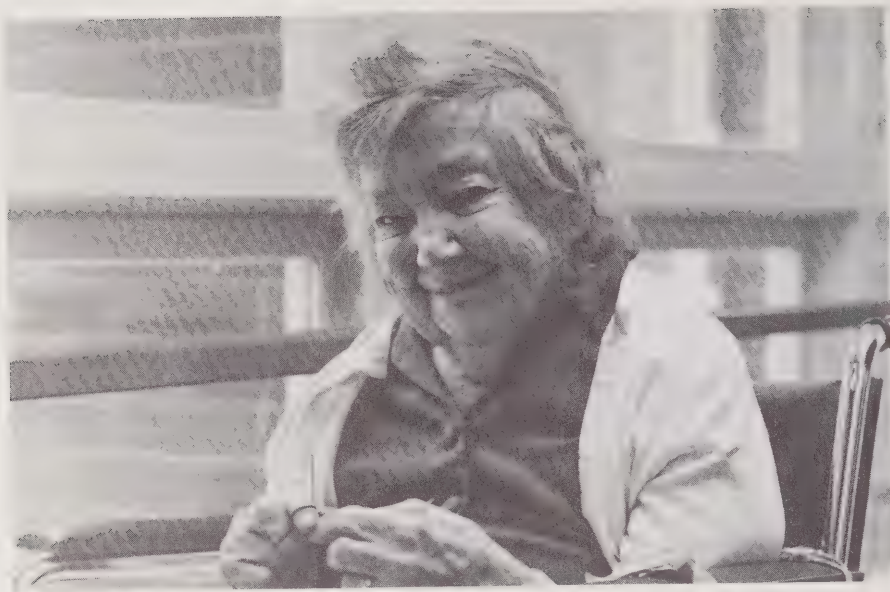
5.32 - 5.38 Consumer Income and Expenditure Division, Statistics Canada.



## CHAPTER 6

---

# SOCIAL SECURITY



## HIGHLIGHTS

---

Canada's system of public social security recognizes that Canadians should have at least minimum resources to meet basic needs.

At age 65 almost all persons become eligible for old age security benefits. They may also receive pensions under the Canada Pension Plan or the Quebec Pension Plan, income supplements from their province, or tax credits on their shelter costs.

Income protection for the work force is provided through an unemployment insurance program to which workers and employers contribute. Employers also contribute to provincial compensation programs for workers who may be injured on the job.

Provinces may provide income assistance through the Canada Assistance Plan (CAP), cost-shared by the federal government.

Families may receive income support in federal family allowances. All provinces and territories have child welfare legislation and policies to support the care and protection of children.

Equality rights of disabled and disadvantaged persons were enshrined in the Canadian Charter of Rights and Freedoms in 1982.

## CHAPTER 6

---

# SOCIAL SECURITY

<b>6.1</b>	<b>Target groups</b>	<b>201</b>
6.1.1	Senior citizens	201
6.1.2	Work force and families	202
6.1.3	Disabled persons	202
<b>6.2</b>	<b>Federal income provisions</b>	<b>202</b>
6.2.1	Senior citizens benefits	202
6.2.2	Family allowances	203
6.2.3	Child tax credit	203
6.2.4	Programs for native peoples	203
6.2.5	Veterans of the Canadian forces	205
6.2.6	Training allowances	206
<b>6.3</b>	<b>Income assistance</b>	<b>206</b>
6.3.1	Canada Assistance Plan	206
<b>6.4</b>	<b>Income insurance</b>	<b>206</b>
6.4.1	Unemployment insurance	206
6.4.2	Worker compensation	208
6.4.3	Canada and Quebec pension plans	208
6.4.4	Funding income insurance	209
<b>6.5</b>	<b>Provincial initiatives</b>	<b>209</b>
6.5.1	Tax credits	209
6.5.2	Income supplements	209
6.5.3	Social services	210
6.5.4	Provincial expenditures	211
<b>6.6</b>	<b>International welfare</b>	<b>211</b>
<b>6.7</b>	<b>Voluntary contribution</b>	<b>211</b>
<b>6.8</b>	<b>Analysis of expenditures</b>	<b>211</b>
<b>6.9</b>	<b>Social concerns</b>	<b>211</b>
6.9.1	Increasing older population	211
6.9.2	Pension reform	212
6.9.3	Family violence	212

## TABLES

6.1, 6.2	Senior citizens benefits	214
6.3, 6.4	Family allowances	216
6.5	Child tax credit program	217
6.6	Payments to registered Indians	218
6.7	Veterans allowances and pensions	218
6.8	Analysis of income security programs	219
6.9, 6.10	Canada Assistance Plan payments	219
6.11	Canada and Quebec pension plans	220
6.12	Analysis of income insurance programs	220
6.13	Provincial welfare programs	221
6.14	Social services programs	221
6.15-6.19	Analysis of social security expenditures	222

## CHARTS

Chart 6.1	OAS recipients and federal payments	204
Chart 6.2	Family allowance recipients and payments	204
Chart 6.3	Major social security legislation	207

## CHAPTER 6

# SOCIAL SECURITY

---

Canada's system of public social security programs provides income protection, health care and a range of social services for Canadians who need them. Under terms of the Canada Constitution Act, 1867, the provinces bear primary responsibility for health and social services. The federal government assumes this responsibility for veterans of the armed forces, registered Indians, Inuit and certain other groups.

Provincial governments, municipalities and local voluntary agencies provide most direct services to the public. Municipal governments receive substantial funding from provincial governments for their community health and social services. The provinces in turn are reimbursed by the federal government for a substantial share of their funding. Voluntary agencies may or may not receive partial government funding.

The goal of social security is humanitarian — to alleviate destitution, disease and disability. It is recognized that Canadians should have at least a minimum of resources to meet their basic needs for day-to-day living and essential health and welfare services to maintain themselves in a state of well-being.

Canadian social programs have roots in charitable activities of the churches and early attempts to organize relief services at the municipal level. In general, programs have been developed to meet social needs as they have arisen in the context of Canadian society.

During and after World War II, the federal government extended its responsibilities for income support through unemployment insurance and universal allowances for the aged and for families with growing children. Later, the senior levels of government shifted their attention to universal health insurance and income insurance relating to the needs of the whole population. Recently the trend has moved toward a more selective approach in the form of tax credits for particular target groups such as the elderly and families with children.

### 6.1 Target groups

#### 6.1.1 Senior citizens

As a proportion of the population, the number of persons over 65 years old is growing rapidly. More and more people are surviving into their 80s and 90s;

this places increased pressures on communities and families. A disproportionate number are women who in the past worked in the home and now lack adequate financial security. Generally, income decreases as senior citizens grow older. This increases their reliance on alternative sources of income. Isolation of the elderly has risen because of demographic change and geographic mobility of their families; thus many have no immediate family to support them. The interrelationship of these socio-economic phenomena has led to a need for support service that was not present in the past. Initially reliance was placed on expensive institutional facilities but this proved costly for governments and taxpayers. Now, instead of institutional care, governments are introducing supportive programs and services so that the needs of aging individuals can be met in a more caring and effective way.

At age 65 almost all persons in Canada become eligible for senior citizens benefits. Elderly persons, their beneficiaries and spouses may also receive cash benefits under the Canada Pension Plan (CPP) or the Quebec Pension Plan (QPP) based on contributions while they were employed. In most provinces senior citizens, if qualified on an income-tested basis, benefit from income supplements paid by the province. All provinces also provide tax credits or rebates to senior citizens on their shelter costs; the payments are generally income-tested.

It is estimated that 200,000 elderly Canadians at any given time are in an institutional environment. About 700,000 spend some time in hospital during a year. The elderly also account for a large proportion of the clientele of community service agencies whether through visits to senior centres and other agencies or through services in their homes, such as meals-on-wheels, home care, home support services and protective oversight. The elderly who are sick or infirm are particularly in need of service and support. Services may range from visiting nursing care to transportation which enables them to obtain medical care or to participate more effectively in community social programs.

Many senior citizens are active in community organizations. Through a federal New Horizons Program many new recreational and social activity centres for the elderly have been developed in

communities across Canada. The elderly also contribute by participating in a variety of forms of volunteer work.

### 6.1.2 Work force and families

Income protection for the work force is provided through an unemployment insurance program to which almost all persons in the labour market contribute. Employers contribute to provincial worker compensation programs to provide income protection for workers injured on the job and for surviving families of workers killed in industrial accidents. Federal and provincial governments enter into contracts with private industry to provide facilities for on-the-job training to enable workers to acquire new skills.

The Canada Pension Plan and Quebec Pension Plan are universal contributory programs which provide income protection for the worker. In addition to regular benefits after retirement, benefits are available for workers required to retire prematurely because of disability. Their dependents also receive benefits. If a worker dies prematurely the widowed spouse receives survivor benefits and allowances are provided for dependent children.

Families receive continuing income support from the federal government in monthly family allowances cheques as long as they have dependent children under 18 living at home. They may claim income-tested tax credits for dependent children when paying income taxes, and tax deductions can be claimed for child care expenses.

All provinces provide assistance to persons in need through their general welfare programs and the costs are shared by the federal government through the Canada Assistance Plan (CAP). The amount of income support is based on calculated deficits in family budgets. These assistance programs apply to one-parent families, the aged, disabled, unemployed, low-income families and children in institutions, group homes or foster care.

The provinces and territories all have child welfare legislation and policies designed to support the family to care for children, to protect children from neglect and abuse, and to provide permanent homes for children who cannot remain with their own families. When children are removed from the care of their families the child welfare agencies endeavour to find alternative placements which meet the children's special needs. Placement may be made in foster or adoptive homes, group homes or institutions with the objective of providing stability for the child. Social agencies provide a variety of other services, family counselling, support for single parents and special services for youth. Social service agencies benefit from integration with other organizations working with the family, such as educational, health and law enforcement systems. Many non-government organizations also provide a support system to families and children through social, cultural and recreational activities.

### 6.1.3 Disabled persons

A small proportion of infants are born with congenital conditions which may induce long-term disability. Traumatic bodily injury or disease may also cause long-term disability, though frequently rehabilitation processes may largely offset the effects of the handicap. Degenerative disease conditions in individuals of advancing age increasingly emerge as factors affecting overall health and well-being. Many persons are dependent because of the combined effects of aging, disease and permanent injury. Canada has largely moved away from traditional segregated custodial care institutions to community-oriented group homes and a progressive system of rehabilitation facilities and services. This serves to normalize the lifestyle and the living environment of disabled persons.

Data on the disabled are provided by the Canada health survey of 1978-79. It reported that approximately 12.6% of the population is disabled in some way. This includes 2.2% of the population whose disabilities did not affect their major activities, and 2% who are severely disabled.

Canada has undertaken to protect the rights of disabled persons through legislation. The federal Canadian Human Rights Act in 1977 prohibited discrimination on the basis of disability. In 1982 the rights of disabled persons were enshrined in the Canadian Charter of Human Rights. There is also provincial legislation protecting the rights of the disabled.

## 6.2 Federal income provisions

### 6.2.1 Senior citizens benefits

The basic old age security (OAS) pension has been in effect since 1952. It is available to all persons aged 65 and over who meet the residence requirements. Since 1967 pensioners with little or no personal income have also been eligible for a guaranteed income supplement (GIS). Application for the supplement is made annually. Since October 1975 a spouse's allowance (SPA) has been available for the spouse of a pensioner with little or no income if the spouse is between 60 and 65 years old and meets the residence requirements. The three components of senior citizens benefits are financed out of federal government revenues.

For a full monthly pension an applicant must have resided in Canada for 40 years after the age of 18 or, under certain circumstances, for 10 consecutive years immediately prior to approval of the pension application. In July 1977 the basis for eligibility was modified to introduce the concept of a partial pension based on years of residence. Increases in the number of recipients and total federal payments are shown in Chart 6.1.

The GIS and SPA benefits are income-tested. The maximum GIS is reduced by \$1 a month for every \$2 a month of personal income. For married couples, any

income is assumed to be equally shared. For spouse's allowance the maximum monthly payment and the GIS equivalent part of the allowance are also reduced according to combined personal monthly income. In 1980, SPA recipients became eligible to continue receiving benefits following death of the pensioner spouse. From October 1973 to October 1982 all benefits under the OAS program were indexed quarterly in accordance with increases in the consumer price index. During this time the number of beneficiaries increased by close to 1% per quarter. In October 1982, there were nearly 2.4 million beneficiaries under Old Age Security and 57% also received a benefit under the Canada or Quebec pension plans. Nationally, about 51% of the OAS beneficiaries also qualified for GIS benefits (Table 6.1).

### 6.2.2 Family allowances

The federal family allowances program was initiated at the end of World War II to provide a basic monthly payment to Canadian families for each child up to age 16. A family assistance program which began in 1956 provided benefits for children of immigrants until they qualified for family allowances after one year in Canada. In 1964, the Youth Allowances Act extended coverage to children aged 17 and 18 years who continued to attend school. The Family Allowances Act, 1973 replaced the former legislation. It covers dependent children up to the age of 18. Monthly benefits were increased to \$20 a month and provision was made to index them annually to correspond to the increases in the cost of living. Normally the allowances are paid to the mother of the child.

In 1983 the family allowance payment was \$28.52 a month in most of Canada, up from \$26.91 in 1982 for children cared for in their own families. A special allowance was paid for children under 18 who were in the care of institutions, welfare agencies, government agencies or foster parents. This was indexed to \$41.87 a month in January 1983 from \$37.65.

The Family Allowances Act, 1973, allows a provincial government to specify rates to be paid in its province, based on age of the child, number of children in the family or both. Quebec and Alberta were the only provinces which chose this alternative. Quebec has an additional provincial family allowance supplement (Table 6.4).

### 6.2.3 Child tax credit

In 1979 the federal government introduced an annual child tax credit for families with children. Application was made through a special form attached to the annual federal tax return. A credit of \$261 per child was payable in 1982 to applicants whose net income for 1981 did not exceed \$23,470. The benefit was reduced by 5% of any net income above that level, so applicants with declared income of more than \$28,690 did not qualify.

### 6.2.4 Programs for native peoples

Indians, as other Canadians, are entitled to the benefits of universal federal programs such as family allowances, old age security pensions, the guaranteed income supplement, and child tax credit. Indians receive Canada or Quebec pension plan payments, unemployment insurance, worker compensation and veterans benefits.

Where there are agreements between the federal and provincial governments, provincial welfare benefits and services are available to registered Indians living on reserves and Crown land, but the amount of help varies according to province. Welfare assistance to registered Indians who do not live on reserves can also vary; most provinces seek recovery from the federal government of the costs of assistance and services.

**Federal-provincial arrangements.** Individual arrangements have been worked out between the federal government and provincial authorities. All welfare programs in Ontario are available to Indians living there, either on or off reserves. In Quebec, federal contracts with eight social agencies furnish welfare service to Indians in their geographic jurisdictions; a James Bay agreement provided for a provincially sponsored Cree health and social services board. In agreement with the federal and Alberta governments the Blackfoot band administers two provincial health and social development programs on the reserve.

The federal Indian affairs department has four main welfare objectives: to ensure that services are comparable to those available to other Canadians in a province; to increase Indian participation in the design and operation of social service programs; to strengthen family life and encourage independence; and to help other government and private agencies provide social services to Indians.

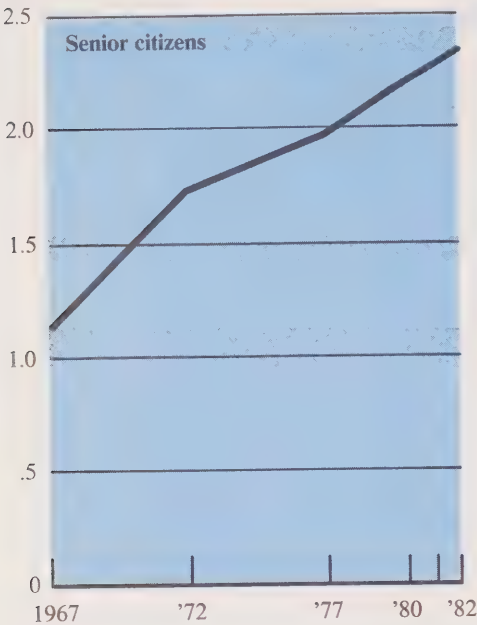
The department's social assistance program provides basic household needs (food, clothing, shelter, fuel). Administration is handled by departmental employees on some reserves, by employees of the band council on others.

Indian residents are subject to the child welfare legislation in their own province. Aim of the federal departmental child care program is to ensure that provincial and territorial services for neglected, dependent, or delinquent children are available to Indian children living on reserves. In conformity with federal-provincial agreements, the Indian affairs department pays for maintenance and protection services to Indian children in Yukon, Manitoba, Ontario, Quebec, Nova Scotia and British Columbia. In provinces where child care services are voluntary, the department pays administrative costs and daily rates for Indian children in foster homes or other agencies.

The department pays for maintenance and care of physically and socially handicapped adults in homes

Chart 6.1  
OAS recipients and federal payments, 1967-82

Million persons



Billion dollars

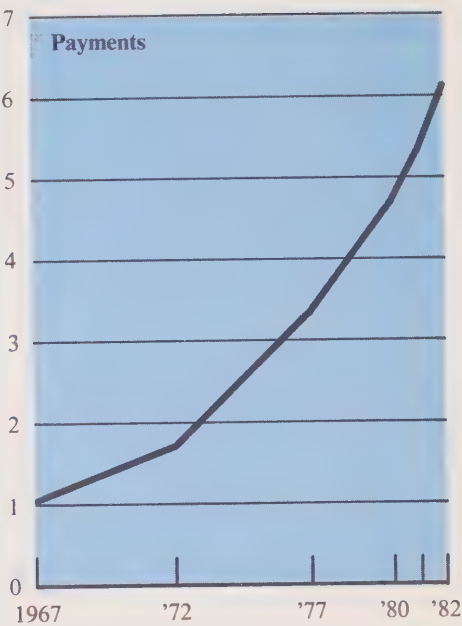
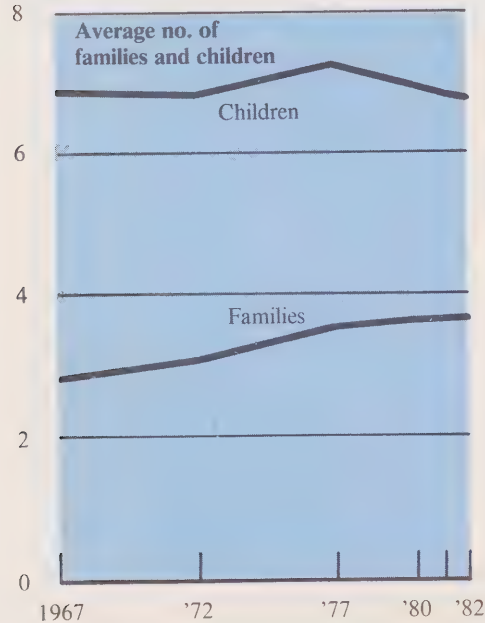
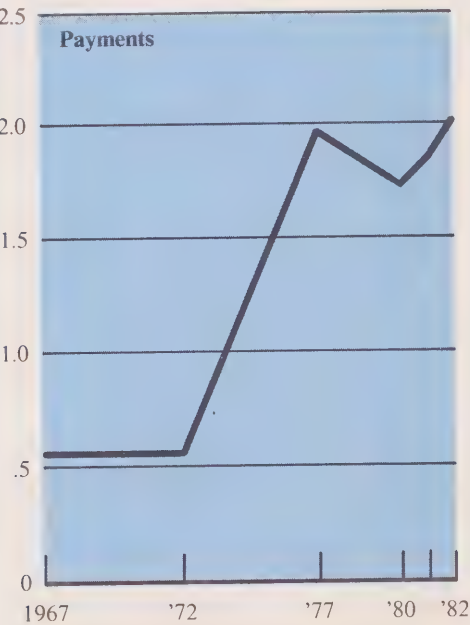


Chart 6.2  
Family allowance recipients and payments, 1967-82

Millions



Billion dollars



for the aged and other institutions. Indian recipients of such benefits as old age security or the guaranteed income supplement may get additional assistance from the department.

With departmental support, a number of bands administer their own day care centres, senior citizens homes, and community based social services. The department also operates a rehabilitation program to avert social problems and reduce the effects of physical disabilities and emotional difficulties.

A work opportunity program gives jobs to people on welfare who are physically able to work. Funds are used to provide native communities with facilities, for example, roads and services such as day care, instead of for direct financial aid. Each project is financed by a reallocation of social assistance funds plus money from other sources (regional appropriations, provincial revenues, band revenues).

The program is an example of the transfer of social service administration from the government to the native people. Approval is granted only to projects that are planned, designed and operated by band councils or their delegated groups.

### 6.2.5 Veterans of the Canadian forces

Legislation for veterans and their dependents is administered by the veterans affairs department (DVA) and four affiliated independent agencies: Canadian Pension Commission, Pension Review Board, War Veterans Allowance Board and the Bureau of Pensions Advocates. Changes in legislation through the years have been made in relation to changing economic and social circumstances of veterans, particularly regarding pensions and allowances. Programs administered by the department include medical treatment, housing, educational assistance, counselling and other services. Departmental work is carried out through regional and district offices across Canada.

**Pensions for death and disability.** The Canadian Pension Commission administers most of the Pension Act, the Compensation for Former Prisoners of War Act and parts of the Civilian War Pensions and Allowances Act.

The Pension Act provides for payment of pensions in respect of disability or death related to military service. These could result from injury or disease incurred during or attributable to service with the Canadian forces in war or arising from or directly connected with peacetime service. Pensions may also be paid to dependents of a disabled former member of the forces or to the surviving dependents of a deceased veteran. The amount of disability pension payable is set out in the Pension Act based on a rate established in 1978 and pensions are indexed in accordance with the consumer price index.

The Compensation for Former Prisoners of War Act provides for compensation to former prisoners of war and their dependents, in addition to any disability pension they may be receiving.

In 1980 the Pension Act was amended to allow for payment of proportionate pensions to dependents of deceased pensioners who at the time of death received disability pensions, compensation for former prisoners of war, or a combination of both, at a rate between 5% and 47% of the former payments.

The Pension Review Board is an independent appeal tribunal. It deals with appeals from decisions of the Canadian Pension Commission in matters of entitlement and the amount of awards under the Pension Act. The board is also the final authority on the interpretation of the act.

The Bureau of Pensions Advocates provides an independent professional legal aid service to applicants for awards under the Pension Act. The chief pensions advocate is the chief executive officer and is assisted by pensions advocates, all of whom are lawyers, at head office in Ottawa and in district offices in major centres across Canada. Pensions advocates prepare applications to the Canadian Pension Commission and represent applicants as counsel at entitlement board and pension review board hearings. No charge is made for these services.

**War veterans allowances.** The War Veterans Allowance Act provides for allowances to war veterans who, because of age or incapacity, can no longer maintain their employment income at a specified level. Widows, widowers and orphans of qualified veterans are eligible for benefits.

**Civilian war allowances.** Similar benefits are available to certain groups of civilians and their widows, widowers and orphans, under the Civilian War Pensions and Allowances Act. These include: Canadian merchant seamen who performed meritorious service during World War I or World War II; non-Canadians who served in Canadian merchant ships in either war; Canadian voluntary aid detachments of World War I; Canadian firefighters, welfare workers and transatlantic crew and the Newfoundland Forestry Unit of World War II.

The War Veterans Allowance Board acts as a court of appeal for aggrieved applicants and recipients, and reviews decisions of district authorities to ensure that adjudication is consistent with the intent and purview of the War Veterans Allowance Act or the Civilian War Pensions and Allowances Act and that the legislation is applied uniformly throughout Canada. The board may at any time review and alter its own former decisions.

**Social and health services** for veterans were integrated in a veterans services branch of the department in 1978. Medical and dental services are provided for eligible veterans throughout Canada. Prosthetic services provided to eligible veterans by the health and welfare department are paid for by DVA.

The veterans services branch provides examination and treatment for pensionable disabilities of recipients of war veterans allowance (but not their

dependents) and veterans who are eligible because of their service and financial circumstances. If a bed is available, any veteran may receive treatment in a departmental hospital on a guarantee of payment. Disability pensioners receive treatment for pensionable disabilities regardless of place of residence. Service to other veterans is available in Canada only. Home care may be provided to eligible veterans.

There are DVA hospitals in Ste. Anne de Bellevue, Que., Winnipeg, Man., and domiciliary care homes at Ottawa, Ont., and Saskatoon, Sask. In Ottawa both acute and chronic cases requiring definitive treatment may be admitted to the National Defence Medical Centre.

**Education assistance to children.** The Children of War Dead (Education Assistance) Act provides help in the form of allowances and the payment of fees for the postsecondary education of children of persons whose deaths were due to military service.

**Social and counselling services.** Counsellors at district offices work closely with branches of the department, with other public and private agencies and organizations in assisting veterans and their dependents to deal with problems of social adjustment. Multi-disciplinary health care teams at each district office assist veterans in coping with the adverse effects of aging.

**Services benevolent funds.** Veterans and their dependents receive assistance through various services benevolent funds. These organizations work in co-operation with the department and veterans organizations in providing cash grants or loans to meet emergencies.

**Land settlement and housing.** Lending activities to purchase land or improve properties were discontinued in March 1977. The Veterans Land Administration assumed the role of providing established veterans with services, assistance and guidance in such areas as property appraisal, improving existing buildings or constructing new ones, easements, gas and oil leases and rights of way. The program monitors contractual obligations and counsels veterans in managing their farms or other property. It assists veterans, their heirs, devisees and personal representatives in acquiring title to property they hold under an agreement of sale.

The program, jointly with and through the Canada Mortgage and Housing Corporation (CMHC), administers the veterans housing assistance program (VHAP).

### 6.2.6 Training allowances

The Canada Employment and Immigration Commission is primarily responsible for providing training opportunities to enable workers to respond to the demand for special work skills. This need applies particularly to new entrants to the labour force or to job applicants shifting their job skills either because of disability or because of changes in

labour market demand. Details on the training programs are found in Chapter 5, Employment and incomes.

## 6.3 Income assistance

### 6.3.1 Canada Assistance Plan

Allowances for the blind (1937, 1952), the disabled (1954) and unemployed and unemployable (1955) were replaced by more flexible and generous provisions of the Canada Assistance Plan (CAP) which came into force in 1966. This plan authorized the federal government to share equally with the provinces in providing direct financial assistance to families and individuals who are in need regardless of the cause, on the basis of a needs test. It also provided for similar federal sharing in the provision of welfare services to persons in need or likely to be in need. The costs of work activity projects carried out by the provinces are also shared under CAP.

While benefits provided vary somewhat among provinces, the general structure of assistance includes payments for basic daily living: food, shelter, clothing and fuel. Provision is made for special needs such as transportation and tools necessary to obtain employment, and essential repairs to property. Social assistance payments are based on the difference between money available from a client's private resources and that required to meet basic needs.

**Homes for special care.** Through CAP, the provinces provide care for needy persons in recognized homes for special care: homes for the aged, nursing homes, child care facilities and hostels for battered women and their children. Since 1977, the major portion of federal costs related to long-term adult residential care has been subsumed under the Federal/Provincial Fiscal Arrangements and Established Programs Financing Act (FPFA/EPF).

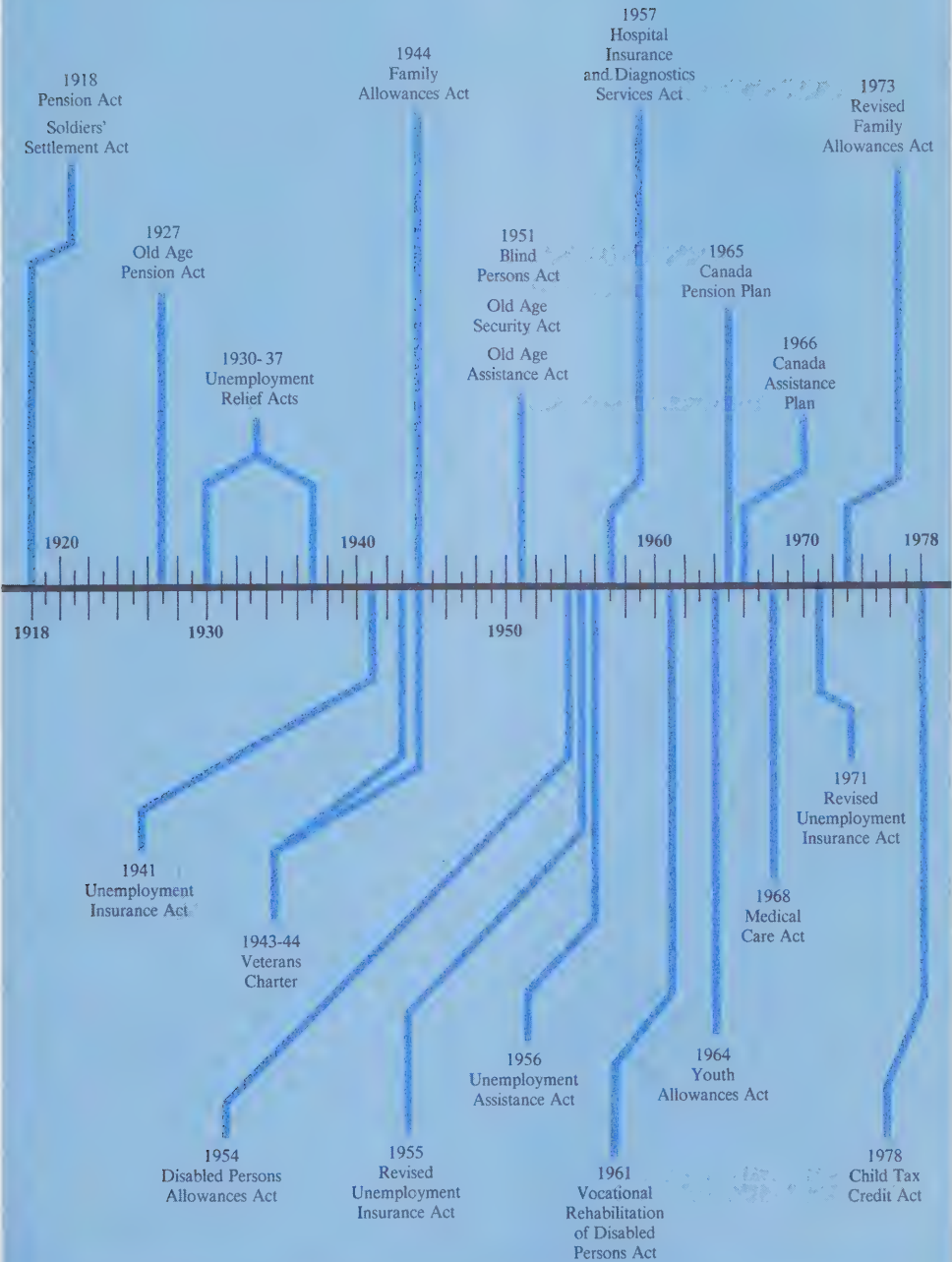
## 6.4 Income insurance

### 6.4.1 Unemployment insurance

The high cost of relief payments before World War II convinced the federal and provincial governments of a need to establish reserves to meet contingencies of high unemployment and economic depression. The federal government took the initiative in 1941 with the Unemployment Insurance Act. It required the consent of all provinces through an amendment to the BNA Act to permit the federal government to introduce such legislation.

Originally designed to provide income protection for low income earners, the unemployment insurance program was revised several times until in 1971 it was made universally applicable to all members of the labour force with certain minor exceptions. Benefits were extended to persons at all levels of earnings. The program was also broadened to provide special benefits for those suffering from extended sickness, to women leaving the labour force temporarily because

Chart 6.3  
Major social security legislation



Source: Social Security Statistics, Information Systems, Health and Welfare Canada.

of pregnancy and childbirth, to unemployed fishermen and to persons enrolled in manpower training courses. (See also Chapter 5, Employment and incomes.)

#### 6.4.2 Worker compensation

Provincial worker compensation programs assist workers when they sustain injuries on the job. Compensation boards across Canada paid \$1.3 billion in benefits to injured workers and their dependents or survivors in 1981-82. (See also Chapter 5, Employment and incomes.)

#### 6.4.3 Canada and Quebec pension plans

The second federal initiative in income insurance came with the introduction of the Canada Pension Plan (CPP) in 1966. The CPP applied to all provinces except Quebec, which undertook to develop its own insurance program, the Quebec Pension Plan (QPP).

Initially proposed in 1963 to provide only for retirement benefits, the CPP and QPP as finally introduced provided also for survivor benefits for a widow or widower and dependent children when a contributor dies prematurely, a death benefit, disability benefits to contributors forced to retire early because of disability, and benefits for their dependent children.

Both the CPP and QPP are funded by equal contributions of 1.8% of pensionable earnings from the employer and 1.8% from the employee. Self-employed persons contribute the full 3.6% of contributory earnings. In 1983, this included the first \$1,800 of earnings, and the maximum on which contributions could be made was \$18,500. (See Table 6.11 for benefits and amounts of payments.)

For CPP, an advisory committee representing employers, employees, self-employed persons and the public regularly reviews the operation of the plan, the state of investments, and the adequacy of coverage and benefits. Reciprocal agreements are in effect with Italy, France and Portugal to achieve portability of pensions. New agreements with the United States, Greece and Jamaica would be in force upon ratification.

**Program administration.** The programs are administered through regional offices across Canada with central control over eligibility for benefits and payment of pensions. Contributions are administered through the taxation systems of the federal and Quebec governments.

**Retirement pension** is payable at 65 years at the earliest and is calculated at 25% of the average adjusted contributory earnings. The minimum period for averaging earnings is 120 months. In November 1982 about 1.2 million persons were receiving retirement benefits.

**Survivors pensions** are payable to the family of a contributor who dies prematurely, after having contributed to the CPP or QPP for at least one-third of the calendar years for which he or she would have been

eligible to contribute. The pension is calculated as a flat rate component plus a component based on the computed retirement pension of the deceased contributor. The age and family status of the surviving spouse also influences the amount of pension payable. In November 1982 approximately 417,000 widows and widowers were in receipt of survivor benefits. About two of every five beneficiaries were over the age of 65.

**Disability pensions.** A contributor with severe and prolonged mental or physical disability that requires withdrawal from the labour force may apply for a disability pension. The applicant must have contributed for at least five whole or part calendar years within the last 10 years. The application is subject to a medical review. The pension may be payable four months after the disability occurred. Like survivor pensions, the disability pension consists of a flat rate component and a computed value of the retirement component. There is no discounting of disability benefits because of a pension received from a worker compensation program or from a private disability insurance plan. In November 1982, about 130,000 Canadians of working age received disability benefits under the CPP or QPP; close to half the beneficiaries were in the 60-64 age group.

**Children's benefits.** The CPP and QPP provide benefits generally to the age of 18 for dependent children of disability pensioners and of surviving spouses. When the child continues in education, the benefits may be paid to the age of 25. Equal benefits are payable for all children in a family.

More than 184,000 children were receiving benefits as of November 1982. The maximum child benefit was \$70.68 per month under the CPP and \$29.00 per month under the QPP.

**Death benefit.** When a contributor dies prior to retirement, a lump sum death benefit is payable to the person's estate if the individual has contributed to the plan for at least one-third of the calendar years possible (a minimum of three years). In January 1983 the value of the death benefit under the CPP and QPP was \$1,850.

**Sharing pension credits.** When a marriage ends in divorce or legal annulment, provision is made for pension credits earned by one or both spouses during their years of marriage to be divided equally. They must have lived together in marriage for at least three consecutive years. Application for division of credits must be made within three years of the date of a decree absolute.

Table 6.11 provides an analysis of Canada and Quebec pension plan payments including benefits for retired persons, the disabled and survivors. Retirement pensions of the CPP and QPP are still in early stages of development. Pensions now being paid are based on a relatively small number of years of contribution. Increasing the years leads to

progressively larger benefits for the individual. As a result of growth of the labour force, particularly with higher participation rates for women, it is expected that the number of beneficiaries will expand rapidly as this work force retires. For survivors and for disability beneficiaries, future increases in payments will be more conservative because of the flat rate component of the benefit. The number of new cases of disability entering the system is also fairly stable. From 1972 to 1976, total payments for disability and survivors benefits exceeded the total payments for retirement benefits. But by 1982, with the plan maturing, total payments for retirement beneficiaries were almost double the amount paid to survivors and disability beneficiaries.

#### 6.4.4 Funding income insurance

In 1965 the CPP and QPP were introduced as programs that would be publicly funded, based on contributions from all employed persons with pensionable earnings from age 18 to 70. By the end of 1981, the balance of funds in the CPP account was \$20.8 billion. The comparable figure for the QPP was estimated to be \$8 billion.

The unemployment insurance program was also set up on a funded basis. Contributions were made to the fund by all employed workers according to a formula that was later substantially modified. Since 1972 annual unemployment insurance expenditures have required more money from the consolidated revenue fund to meet payments to beneficiaries. In fiscal 1980-81, revenues from premium contributions to the unemployment insurance fund amounted to \$3.4 billion. Changes in regulations extended the number of work weeks required to become eligible for benefits and modified terms for continuation of benefits.

Worker compensation, administered by a government board on behalf of the employers of each province, is financed by contributions entirely from business, industry and government enterprises. A substantial balance is always held in reserve to provide for future payments of pensions for injured and deceased workers. Total compensation payments in calendar year 1981 amounted to \$1.3 billion.

**Trends in expenditures.** Expenditures on income insurance benefits by federal and provincial governments combined rose from \$2.2 billion in 1971-72 to \$10.0 billion in 1981-82, close to five times as much in 10 years (Table 6.12). Despite the rapid growth of CPP and UIC, income insurance increased its share of total social security expenditures only from 18.2% in 1971-72 to 20.1% in 1981-82.

### 6.5 Provincial initiatives

While a considerable share of financial support for the needy comes from federal funding, individual provinces pioneer new programs to protect and maintain the well-being of low income persons. These initiatives are sometimes fully funded

provincially; others are cost-shared with the federal government. Innovation is taking place in three major areas: systems of tax credits, direct income supplementation, and social services programs.

#### 6.5.1 Tax credits

In nearly all provinces tax credits or grant programs are available to both homeowners and renters. In general such credits or grants are income. These programs have been implemented to support families and the elderly who cannot cope with rapidly rising costs of shelter.

The first programs refunded or deferred most property and school taxes levied on the residences of elderly homeowners. In other cases smaller rebates were paid to homeowners, usually relating the amount of the rebate to income. A more recent development in the 1970s was the creation of programs to assist renters, particularly the elderly, either through occupancy cost rebates which go directly to the renter, or through shelter allowances which pay all or part of rent that exceeds a percentage of income ranging from 20% to 30%. The rebates of property tax and occupancy cost are administered by the income tax or property tax collection authorities; shelter allowances are usually paid by the provincial housing authorities. Additional forms of tax credit programs have since been introduced by the provinces. For example, since 1981 Quebec has allowed tax-filers to opt for an allowance in lieu of a deduction for child care expenses (for children under 6 years of age), amounting to \$300 for the first child, \$200 for the second and \$100 for each additional child claimed. Manitoba has provided a cost of living tax credit since 1974. Ontario included home heating credits in tax returns for 1981 through 1983, and Yukon pays an annual \$480 pioneer utility grant to tax-filers 65 or older. These provincial initiatives are part of the social security system and account for substantial expenditures.

#### 6.5.2 Income supplements

Provincial income supplement programs have been designed to assist the elderly, the disabled or families with insufficient income to maintain themselves independently.

**Senior citizens.** Except for Quebec and Prince Edward Island, provincial governments have instituted income supplements (top-ups) for the elderly. In general these programs provide a monthly, quarterly or annual income supplement payment to OAS beneficiaries in receipt of the GIS benefit. Usually such supplements are also income tested. In Ontario and the western provinces equivalent benefits are also payable to residents over 55 who are unable to maintain themselves. These programs include a guaranteed available income for need (GAIN) for the elderly in British Columbia, the Alberta assured income plan (AAIP), the

Saskatchewan income plan for the elderly (SIP), the Manitoba supplement for pensioners (MSP), an Ontario guaranteed annual income for the aged (GAINS-A), and special social assistance (SSA) in Nova Scotia. In New Brunswick, rental assistance to the elderly (RATE), is paid monthly to low income aged persons who acquire their accommodation on the open market.

**Disabled persons** are frequently supported financially either indefinitely or during rehabilitation. Many receive social assistance under the Canada Assistance Plan. Others may receive benefits under provincial vocational rehabilitation programs, through worker compensation, Canada manpower training allowances or unemployment insurance. Provincial programs cost-shared by the federal government under the Vocational Rehabilitation of Disabled Persons Act are designed to assist physically and mentally disabled persons to become capable of pursuing gainful occupation such as employment in the open labour market, self-employment, homemaking, farm work, sheltered employment or other paid work. In 1981-82, VRDP payments of \$39.3 million in support of provincial programs helped about 100,000 Canadians. The provinces also have programs which are specific to the needs of the chronically disabled. Income supplements include GAIN for the handicapped in British Columbia, Alberta assured income for the disabled (AAID), and Ontario guaranteed income supplement for the disabled (GAINS-D). Quebec provides a special supplement to families caring for a disabled child, allocations aux enfants handicapés (AAEH).

**Families.** Saskatchewan pioneered in 1974 by introducing a family income supplement (FIP), for both working and non-working families. The benefit, which is income tested, includes provision for a dependent spouse and all dependent children. Beneficiaries under the program are not also eligible for social assistance. Quebec introduced a work income supplement program in 1979 for working families with low incomes. Manitoba introduced a child related income supplement program (CRISP) in 1980 for low-income families.

### 6.5.3 Social services

Many forms of assistance other than financial may be required by persons in need, for example in a family crisis brought about by desertion, illness or death. A broad range of social services is provided across Canada. Characteristically, they emphasize social rather than economic support. The funding mechanisms, administration and delivery of such services is particular to each province and municipal jurisdiction. The federal government, through the Canada Assistance Plan, shares in the costs of a wide range of welfare services provided by the provinces (including municipalities) or provincially approved non-profit agencies.

The services reflect perceived social needs. They vary according to the community and family environment and are geared to the physical and mental health of persons who need support systems to take part in community life. Many programs are oriented toward prevention of need while others involve long-term services. An underlying philosophy is that there should be a system of support for independent living in the home environment, and services to prevent, delay or reduce the need for institutional care of the elderly and disabled. Services also compensate for the absence of family support systems resulting from increased participation of women in the workforce, the geographic mobility of families and the high rate of marriage breakdown.

The International Year of Disabled Persons in 1981 stimulated the development or expansion of services for the disabled. The report *Obstacles* of the special committee on the disabled and the handicapped identified many areas where obstacles prevented disabled persons from participating fully in community life. Initiatives have been undertaken by all levels of government, voluntary organizations and the private sector to remove these obstacles and to equalize opportunities for disabled persons. Several provinces have introduced aids to independent living programs to assist disabled persons to maintain themselves independently. Government sponsored group homes in the community provide special living environments for handicapped persons with varied needs.

Services to families and individuals include crisis intervention, family planning, information and deferral, and social integration services for persons who are, or are at risk of becoming, isolated from community life. Protective and developmental services are particularly oriented toward children. Day care has been established for children and for dependent adults. Home support services that may be provided to enable persons to remain in their own homes include basic housekeeping, regular visits, heavy cleaning and meal services. Transportation services for the elderly and the disabled are commonly provided. Personal, budget and family counselling assist persons with social problems and aid in preventing more problems. Communities offer activity centres, enrichment programs, sheltered workshops and vocational rehabilitation. Provinces also provide nursing and medical services, nutrition counselling, nursing home and intermediate care, residential care and ambulatory health services under the Established Programs Financing Act.

**A national welfare grants program** set up in 1962 helps to develop and strengthen social services. It is the major funding body for social welfare research and development. Project grants are made to provincial and municipal welfare departments, non-governmental welfare agencies, citizens organizations and universities. Fellowships at Canadian and

other universities are provided to individuals seeking advanced training in social welfare. The program has a variety of provisions and consulting services which allow it to operate as a flexible instrument in developing welfare services and to encourage experimental activities in the delivery of social services. The allotment for the fiscal year ending March 1983 was \$3.3 million.

#### 6.5.4 Provincial expenditures

Overall spending by provincial welfare administrations independent of federal government funding is summarized in Table 6.13.

Expenditures for provincial tax credits and rebates for shelter have exceeded \$1.0 billion annually since 1978-79 and were over \$1.5 billion in 1982-83.

Expenditures on income supplements for senior citizens, the disabled, and families comprised the other major area of provincial social security initiatives. In most provinces, supplements for the aged are additional to the federal OAS benefits. Some provinces provide similar income guarantees for disabled persons and for low income families; these programs accounted for an estimated \$1 billion in provincial spending in 1982-83.

### 6.6 International welfare

Canada is involved in social development activities of the United Nations, particularly with the United Nations International Children's Emergency Fund (UNICEF) and in social programs of the Organization for Economic Co-operation and Development (OECD). Federal and provincial departments and agencies participate in the work of several international non-government organizations. Program information is exchanged on social affairs with UN agencies, the Council of Europe, OECD, the Overseas Development Institute and social affairs departments in other countries.

Canadian officials also participate in the International Social Security Association and the social security program of the International Labour Organization.

### 6.7 Voluntary contribution

Because of the tradition of local administration in Canada and the need for community involvement in social services, voluntary agencies continue to play a major role in the administration of social services. On the other hand, federal, provincial and municipal governments have increasingly recognized their own responsibilities for funding and developing social services.

In the early 1980s about 46,500 agencies were registered as charitable organizations in Canada. In the health and welfare areas they covered community support activities ranging from those which provide

direct care for individuals in need to the operation of broad community services.

Voluntary work represents a major contribution to the operation of health and welfare organizations. A survey conducted by Statistics Canada in February 1980 indicated that 15% of the adult population participates in voluntary work. Much of this effort is directed to the health and welfare field in services, transportation, administration and client support activities.

### 6.8 Analysis of expenditures

During the 16-year period 1965-82, total social security expenditures for all levels of government increased from \$4.7 billion to \$52.1 billion. External factors influencing this growth were a 3.5% increase in population and a two-thirds decline in the purchasing power of the Canadian dollar as a result of cumulative inflation. Discounting these factors the net value of benefits on a per capita basis for the country increased almost threefold. Coincidentally real income on a per capita basis more than doubled.

In the mid-1960s, about 38% of all social security expenditures came under three major federal programs: family allowances, old age pensions and unemployment insurance benefits. By 1982, the same benefits with liberalized rates accounted for only 25% of the total. The bulk of the remaining expenditures was accounted for by health programs, veterans allowances and disability pensions. The share of expenditures on these programs changed only marginally throughout this period. A growing proportion of total spending was accounted for by new and enriched programs which were introduced in the evolution of social policy in Canada.

These programs, described earlier in this chapter, included: the Canada and Quebec pension plans; the Canada Assistance Plan to support persons in need; the guaranteed income supplement (GIS) to augment benefits of many OAS recipients; the Medical Care Insurance Act in 1968 and matching provincial legislation by 1971; more comprehensive unemployment insurance with extended benefits in 1971; tax credits or rebates introduced during the 1970s, allowing claims to be made by persons filing tax returns, including the federal child tax credit and provincial pay-back benefits from provincial or municipal taxes.

### 6.9 Social concerns

A variety of social concerns, currently topical in Canadian society, include the following:

#### 6.9.1 Increasing older population

Demographic data from the 1981 Census show that the proportion of elderly in the population is growing rapidly, and that this will become an increasingly important factor in planning for and defraying the

costs of social security programs. In 1981 there were nearly 2.4 million persons 65 years of age and over, or about 10% of the population. Projections based on census data indicate that by 2001 there will be 3.4 million persons 65 years of age or over, or 12% of the population. Projections for 2026 are 5.6 million to 5.8 million or 16% to 19%. This increase in a group which is predominantly non-participating in the labour force will have significant repercussions.

The combined old age security, guaranteed income supplement and spouse's allowance programs accounted for \$1.9 billion and assisted 1.7 million recipients in 1971. By 1982 the amounts were \$8.6 billion for nearly 2.4 million recipients. It is expected that expenditures will rise faster than the population increase since demographers are predicting that women will continue to live longer than men. Since working women on average have modest salaries, it may be expected that they will have moderate retirement incomes for the next 10 to 20 years. Indeed, older women as a group, unless they share retirement incomes with their spouses, make up a significant component of Canada's poor. This group will impose an increased demand for income support, community services and, in the longer term, institutional care.

A world assembly on aging under United Nations auspices was convened in Vienna in July 1982 to consider solutions to current and future problems of the aged. The Canadian position was documented in two reports. *Canadian government report on aging*, Department of Health and Welfare, Ottawa, was prepared as a co-operative effort of federal, provincial and territorial governments. The other report, presenting the views of non-governmental organizations working for the well-being of senior citizens, was prepared by the National Advisory Council on Aging.

**New Horizons.** This program, specifically directed to senior citizens, was established by the federal government in 1972. Its goal is to help alleviate feelings of social isolation or loneliness often experienced by older persons. In this self-help program grants are distributed to groups of senior citizens to enable them to become actively involved in planning and operating projects for their own betterment and that of other older persons in the community. Projects funded provide recreational services, community and information services, and activity and drop-in centres for seniors. By 1982, about one-third of the 2.4 million retired Canadians were active in the program.

### 6.9.2 Pension reform

Concern with pension reform arises from the knowledge that the increasingly larger portion of senior citizens will require adequate income in their post-retirement years. On average one of every two elderly Canadians is poor, that is, with income

sufficiently low to qualify for a guaranteed income supplement. This means that 50% of elderly Canadians have inadequate retirement incomes.

Various factors contribute to this inadequate income security provision; not the least is the inability to earn enough income to accumulate savings. Current thinking suggests that provisions for pension plans could be improved to reduce the number of elderly-poor. The Canada Pension Plan does not provide sufficient additional income beyond old age security benefits. Coverage of employees by private pension plans is not adequate for several reasons. Since many employer sponsored plans are not portable, labour force participants lose their pensions when they change employment. Small businesses usually do not have private pension plans. Thus slightly less than half of CPP/QPP contributors are members of employer-sponsored pension plans. Significantly, only about 11% of employees at the lowest income levels are covered, in contrast to nearly 85% of those earning more than \$30,000. Women, because of their low labour force participation, are not all covered by CPP/QPP and even fewer are covered by private pension plans. In 1980 about 45% of men in the labour force were covered by private pension plans but only 31% of women and the number of workers participating in employer-sponsored pension plans changed little in the following two years. Initiatives are being taken by all levels of government to deal with these concerns. In December 1982 the federal government published *Better pensions for Canadians* setting out proposals to improve pensions. A parliamentary committee was appointed to recommend means of implementing the proposals.

### 6.9.3 Family violence

The problem of child abuse has been recognized for many years and legislation has been enacted relating to neglected and abandoned children. The International Year of the Child in 1979 generally increased awareness of the full range of child abuse. Increased public sensitivity led to the implementation of reporting systems and registries to identify child abuse and to facilitate preventive and remedial action.

In January 1980, the Canadian Advisory Council on the Status of Women documented the problem of wife-beating in a report *Wife battering in Canada*. The report estimated that about 25,000 women might seek shelter in appropriate centres if resources were available.

Physical abuse and neglect of the elderly have also become issues of concern though their magnitude is not known.

The health and welfare department established a national clearing house on family violence in January 1982 to provide information and support to professional groups, to educate the general public

about the nature of violence within families and to collect information on wife assault, child abuse and neglect and abuse of the elderly.

As part of its public awareness program, the clearing house sent information on wife-battering in October 1982 as a family allowance cheque insert to an estimated 3.8 million homes, with suggestions about where to seek help.

A major research project carried out by the clearing house in co-operation with 168 transition

houses and shelters across Canada should lead to increased knowledge about the financial status of Canadian shelters for battered women, the composition of transition house staffs, and the extent and type of services provided to women and children from violent homes. A directory of transition houses and information kits were being prepared.

### Sources

6.1 - 6.2.3 Information Systems Directorate, Policy Planning and Information Branch, Department of National Health and Welfare.

6.2.4 Communications Branch, Department of Indian Affairs and Northern Development.

6.2.5 Public Affairs Directorate (Ottawa), Department of Veterans Affairs.

6.2.6 - 6.9.3 Information Systems Directorate, Policy Planning and Information Branch, Department of National Health and Welfare.

### Selected references

*Canadian government report on aging.* Health and Welfare Canada, Ottawa, 1982.

*Obstacles, report of the special committee on the disabled and the handicapped.* Supply and Services Canada, Ottawa, 1981.

Social security, national programs, 1982. 7 volumes: vol.1, *Overview*; vol.2, *Unemployment insurance*; vol.3, *Canada and Quebec pension plans*; vol.4, *Family allowance and related programs*; vol.5, *Old age security, guaranteed income supplement and spouse's allowance*; vol.6, *Social allowances and services*; vol.7, *Other programs*. Statistics Canada 86-505 to 86-511, Ottawa, 1982-84.

*Wife battering in Canada.* Canadian Advisory Council on the Status of Women, Ottawa, January 1980.

# TABLES

... not available  
 ... not appropriate or not applicable  
 — nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

## 6.1 Senior citizens benefits, recipients and federal payments,<sup>1</sup> selected years<sup>2</sup>

Province or territory	Old age security (OAS) average number of recipients					
	1967	1972	1977	1980	1981	1982
Newfoundland	21,876	32,464	37,129	41,493	42,959	44,206
Prince Edward Island	9,086	12,361	13,314	14,337	14,626	14,850
Nova Scotia	51,393	72,501	80,522	87,905	90,689	92,959
New Brunswick	38,047	54,557	61,045	66,972	69,262	71,075
Quebec	253,590	416,690	485,942	534,105	553,181	570,221
Ontario	417,800	642,960	728,659	812,279	834,312	857,468
Manitoba	67,338	96,409	106,574	115,587	119,251	121,716
Saskatchewan	67,905	94,579	102,708	110,534	113,382	116,184
Alberta	76,860	118,060	135,355	149,539	154,921	159,472
British Columbia	139,100	203,590	235,727	266,783	281,018	291,172
Yukon	305	502	576	677	689	704
Northwest Territories	513	848	1,071	1,193	1,205	1,249
Canada	1,143,800	1,745,500	1,988,606	2,201,497	2,276,159	2,342,480
	OAS federal payments (\$'000,000)					
	1967	1972	1977	1980	1981	1982
Newfoundland	19.7	31.2	61.9	88.3	100.3	115.9
Prince Edward Island	8.2	11.9	22.1	30.5	34.2	38.9
Nova Scotia	46.5	69.5	134.2	186.9	211.9	243.7
New Brunswick	34.4	53.0	103.5	143.0	162.1	186.6
Quebec	228.8	398.4	808.0	1,136.6	1,295.9	1,499.2
Ontario	377.6	620.9	1,215.4	1,723.5	1,950.1	2,245.0
Manitoba	60.8	92.3	177.8	245.5	277.6	318.2
Saskatchewan	61.5	91.9	172.0	234.8	264.7	304.4
Alberta	69.5	112.8	226.9	318.4	362.6	419.1
British Columbia	125.6	196.0	394.0	567.3	657.0	762.6
Yukon	0.3	0.5	1.0	1.5	1.6	1.9
Northwest Territories	0.5	0.8	1.9	2.6	2.9	3.5
Canada	1,033.4	1,679.3	3,318.9	4,679.0	5,322.1	6,140.6
	Guaranteed income supplement (GIS) average number of recipients					
	1967	1972	1977	1980	1981	1982
Newfoundland	18,037	27,312	30,250	33,422	34,634	35,785
Prince Edward Island	6,444	9,469	9,884	10,303	10,495	10,671
Nova Scotia	30,613	48,469	53,388	57,506	59,437	61,165
New Brunswick	21,937	36,712	39,684	44,253	45,716	47,067
Quebec	136,306	254,490	303,101	336,012	347,899	359,966
Ontario	128,639	302,720	336,231	358,174	367,523	377,960
Manitoba	35,633	56,784	61,658	63,353	64,276	65,304
Saskatchewan	33,132	55,905	56,237	59,229	60,069	60,813
Alberta	36,526	68,540	77,196	79,890	81,068	81,270
British Columbia	57,922	106,190	121,766	128,839	131,922	133,141
Yukon	26	306	325	361	349	346
Northwest Territories	25	732	815	947	929	944
Canada	505,240	967,620	1,090,534	1,172,289	1,204,594	1,234,823

6.1 Senior citizens benefits, recipients and federal payments,<sup>1</sup> selected years<sup>2</sup> (concluded)

Province or territory	GIS federal payments (\$'000,000)					
	1967	1972	1977	1980	1981	1982
Newfoundland	1.5	16.0	30.7	47.6	61.2	72.6
Prince Edward Island	0.5	5.3	9.5	13.9	17.7	20.7
Nova Scotia	2.5	27.6	51.5	75.6	97.5	114.8
New Brunswick	1.8	20.2	29.4	59.2	76.3	90.2
Quebec	11.0	145.4	294.2	441.7	573.6	680.9
Ontario	9.8	155.0	299.6	435.9	557.9	648.2
Manitoba	2.7	31.2	56.0	79.9	101.2	116.5
Saskatchewan	2.5	30.0	51.6	76.2	96.2	111.8
Alberta	2.9	38.0	71.8	101.5	127.9	146.6
British Columbia	4.4	56.7	111.5	160.6	205.0	235.3
Yukon	—	0.2	0.4	0.5	0.7	0.8
Northwest Territories	—	0.5	1.0	1.5	1.9	2.3
Canada	39.6	526.1	1,017.1	1,494.4	1,918.1	2,242.0
Spouse's allowance (SPA) average number of recipients						
	1976	1977	1978	1980	1981	1982
Newfoundland	2,379	2,849	2,841	3,047	3,292	3,437
Prince Edward Island	666	696	687	718	734	750
Nova Scotia	3,473	4,104	4,097	4,379	4,661	4,739
New Brunswick	2,086	3,027	3,111	3,306	3,641	3,794
Quebec	15,905	21,535	22,094	23,804	25,283	26,375
Ontario	12,434	17,714	17,783	19,793	21,388	22,946
Manitoba	3,745	4,215	4,262	4,211	4,407	4,384
Saskatchewan	3,415	3,998	3,980	4,108	4,350	4,266
Alberta	3,968	5,371	5,378	5,342	5,544	5,445
British Columbia	6,103	8,215	8,186	8,292	8,579	8,336
Yukon	3	12	27	15	20	17
Northwest Territories	17	45	51	53	39	30
Canada	54,194	71,781	72,496	77,070	81,939	84,527
SPA federal payments (\$'000)						
	1976	1977	1978	1980	1981	1982
Newfoundland	1,719	5,456	6,156	7,862	9,453	11,053
Prince Edward Island	529	1,158	1,256	1,613	1,844	2,079
Nova Scotia	2,637	6,264	5,828	8,850	10,812	12,453
New Brunswick	1,682	4,397	5,693	7,188	8,982	10,585
Quebec	10,468	31,898	37,127	47,288	57,666	66,001
Ontario	6,761	20,614	23,697	32,074	40,151	47,391
Manitoba	2,460	6,096	6,708	7,903	9,418	10,492
Saskatchewan	2,313	5,916	6,570	8,031	9,533	10,516
Alberta	2,373	7,443	8,475	10,020	11,780	12,783
British Columbia	3,978	11,272	12,422	15,112	17,806	19,219
Yukon	2	22	33	42	66	67
Northwest Territories	14	90	134	163	136	170
Canada	34,936	100,626	115,000	146,148	177,652	202,844

<sup>1</sup>Indexed quarterly according to consumer price index.

<sup>2</sup>Fiscal year ending March 31.

## 6.2 Percentage change in expenditures and caseloads, federal senior citizens benefits

Year <sup>1</sup>	Change in caseload <sup>2</sup>			Increase in expenditures <sup>2</sup>		
	OAS	GIS	SPA	OAS	GIS	SPA
1973	2.63	4.99	—	6.09	41.20	—
1974	2.60	4.85	—	27.67	2.32	—
1975	2.71	0.49	—	14.65	10.09	—
1976	2.55	-0.01	—	14.10	10.36	—
1977	2.72	1.93	32.45	11.53	10.15	88.03
1978	3.12	-2.18	0.99	10.53	5.95	14.28
1979	3.16	6.18	1.66	12.59	14.52	9.83
1980	4.06	3.49	4.58	13.28	21.09	15.71
1981	3.39	2.75	6.32	13.74	28.35	21.56
1982	2.91	2.51	3.16	15.38	16.88	14.18

<sup>1</sup>Fiscal year ending March 31.

<sup>2</sup>From the preceding year.

## 6.3 Family allowances, recipients and payments, selected years<sup>1</sup>

Province or territory	Average number of children					
	1967 <sup>2</sup>	1972 <sup>2</sup>	1977	1980	1981	1982
Newfoundland	210,410	209,510	225,258	213,807	210,078	205,454
Prince Edward Island	39,454	37,541	41,252	39,481	38,760	37,819
Nova Scotia	266,180	254,550	273,968	258,562	252,883	246,697
New Brunswick	231,500	215,590	236,878	225,675	220,953	215,452
Quebec	2,038,900	1,893,500	1,943,108	1,810,016	1,773,884	1,739,468
Ontario	2,300,000	2,383,900	2,545,981	2,425,646	2,379,993	2,332,158
Manitoba	316,940	304,240	323,948	305,490	298,375	293,295
Saskatchewan	331,730	297,990	306,447	297,651	294,584	292,049
Alberta	526,390	545,690	613,974	629,601	638,869	649,113
British Columbia	598,650	645,160	738,549	720,340	722,663	724,565
Yukon	16,878	21,642	7,735	7,529	7,362	7,427
Northwest Territories	—	—	19,624	19,506	19,340	19,379
Canada <sup>3</sup>	6,877,000	6,809,400	7,276,495	6,953,319	6,857,744	6,762,896
Province or territory	Average number of families					
	1967 <sup>2</sup>	1972 <sup>2</sup>	1977	1980	1981	1982
Newfoundland	70,016	77,669	92,633	95,903	96,876	97,440
Prince Edward Island	14,085	14,700	17,655	18,586	18,708	18,671
Nova Scotia	105,010	111,030	128,354	130,657	130,826	130,411
New Brunswick	82,884	88,522	107,447	111,288	111,627	111,192
Quebec	799,860	848,350	960,609	969,078	968,850	966,604
Ontario	997,840	1,097,500	1,267,954	1,285,885	1,282,889	1,273,198
Manitoba	131,330	134,460	152,967	151,967	150,413	149,594
Saskatchewan	131,160	124,590	137,961	142,436	143,215	143,756
Alberta	214,770	239,320	291,534	319,194	329,800	339,583
British Columbia	260,310	302,880	370,400	378,427	390,931	396,104
Yukon	6,447	8,802	3,670	3,882	3,862	3,953
Northwest Territories	—	—	7,661	8,080	8,131	8,318
Canada <sup>3</sup>	2,813,700	3,047,900	3,538,845	3,615,383	3,636,129	3,638,815
Province or territory	Federal payments (\$'000,000)					
	1967 <sup>2</sup>	1972 <sup>2</sup>	1977	1980	1981	1982
Newfoundland	17.0	16.9	61.1	52.7	56.6	61.3
Prince Edward Island	3.2	3.1	11.2	9.7	10.4	11.3
Nova Scotia	21.5	20.9	74.4	63.9	68.3	73.7
New Brunswick	18.8	17.7	64.4	55.7	59.6	64.3
Quebec	165.1	156.2	526.8	451.8	473.8	513.0
Ontario	185.3	191.4	694.3	600.9	644.8	699.4
Manitoba	25.7	24.7	88.1	75.7	80.8	87.9
Saskatchewan	26.9	24.3	83.4	73.7	79.8	87.4
Alberta	42.6	44.3	167.5	156.2	172.7	195.2
British Columbia	48.5	53.1	201.1	178.8	196.7	218.0
Yukon	1.4	1.8	2.1	1.9	2.0	2.3
Northwest Territories	—	—	5.4	4.9	5.3	5.9
Canada <sup>3</sup>	555.8	554.4	1,979.8	1,725.8	1,850.9	2,019.5

<sup>1</sup>Fiscal year ending March 31.

<sup>2</sup>Does not include youth allowances or Quebec school allowances.

<sup>3</sup>Includes persons who reside outside of Canada.

6.4 Family allowances in Quebec and Alberta (dollars)

Monthly payments	Federal rates by age group						Provincial supplement		
	Under 12 years			12 to 18 years			Under 18 years		
	1980	1981	1982	1980	1981	1982	1980	1981	1982
Quebec									
1st child	13.08	14.37	16.15	18.53	20.36	22.88	6.45	7.09	7.09
2nd child	19.62	21.56	25.65	25.07	27.55	32.38	8.63	9.48	9.48
3rd child	40.28	44.27	62.43	45.73	50.26	69.16	10.77	11.84	11.84
Each additional child	50.19	55.16	62.43	55.64	61.15	69.16	12.92	14.20	14.20
Alberta	Federal rate								
Age	1980	1981	1982	Age			1980	1981	1982
Under 6 years	16.50	18.20	20.90	12-15 years			27.20	29.90	34.30
7-11 years	20.70	22.80	26.10	16-17 years			30.50	33.60	38.50

6.5 Child tax credit program

Year and province or territory	Families receiving credit	Children claimed for tax	Amount of tax credit
1980			
Newfoundland	81,488	189,583	37.7
Prince Edward Island	15,079	33,119	6.7
Nova Scotia	103,590	216,445	42.3
New Brunswick	90,355	192,190	37.5
Quebec	685,364	1,356,562	256.7
Ontario	839,216	1,745,312	305.7
Manitoba	115,367	249,438	47.8
Saskatchewan	103,325	233,028	43.9
Alberta	180,716	391,119	67.9
British Columbia	235,284	480,231	82.6
Yukon	1,929	3,500	0.7
Northwest Territories	4,812	13,408	2.6
Canada <sup>1</sup>	2,459,487	5,109,059	933.2
1981			
Newfoundland	81,851	185,014	40.6
Prince Edward Island	16,237	33,851	7.5
Nova Scotia	103,552	204,477	43.8
New Brunswick	90,481	187,691	40.5
Quebec	685,397	1,327,691	272.9
Ontario	839,132	1,715,705	329.3
Manitoba	117,401	253,648	52.4
Saskatchewan	108,159	244,520	50.4
Alberta	194,840	417,696	81.3
British Columbia	230,197	464,102	89.1
Yukon	1,898	4,117	0.8
Northwest Territories	5,420	14,656	3.1
Canada <sup>1</sup>	2,478,158	5,060,059	1,013.2

<sup>1</sup>Includes persons who reside outside of Canada.

## 6.6 Federal social support payments<sup>1</sup> to registered Indians (thousand dollars)

Province or territory	Social assistance payments						
	1976	1977	1978	1979	1980	1981	1982
Newfoundland	—	—	—	—	—	—	—
Prince Edward Island	376	410	490	597	666	921	492
Nova Scotia	2,617	2,849	3,371	4,118	4,590	6,312	8,099
New Brunswick	2,166	2,340	2,780	3,405	3,804	5,235	7,149
Quebec	5,567	5,500	5,732	7,099	9,605	11,693	14,074
Ontario	8,443	8,671	9,345	10,559	13,235	14,823	17,844
Manitoba	15,642	18,024	20,157	25,275	27,368	33,736	35,591
Saskatchewan	12,876	15,809	13,333	20,906	23,822	24,186	29,882
Alberta	12,739	12,578	14,517	15,583	18,465	18,872	22,420
British Columbia	11,761	11,584	15,146	15,403	19,185	24,422	28,818
Yukon	824	195	878	1,104	1,265	1,785	2,242
Northwest Territories	—	—	—	—	—	—	—
Canada	73,023	78,660	85,749	104,049	122,005	141,985	166,611

Province or territory	Payments for social services						
	1976	1977	1978	1979	1980	1981	1982
Newfoundland	—	—	—	—	—	—	—
Prince Edward Island	58	70	77	169	163	168	47
Nova Scotia	384	452	472	1,163	1,124	1,148	1,478
New Brunswick	312	350	385	961	932	953	469
Quebec	843	1,312	1,475	3,558	3,843	10,750	4,923
Ontario	3,213	4,195	4,253	6,614	6,476	6,575	13,937
Manitoba	3,042	3,165	3,191	5,371	4,704	6,116	8,150
Saskatchewan	1,988	2,179	2,385	4,088	2,358	2,970	3,078
Alberta	3,615	4,094	4,927	6,827	4,889	6,454	8,668
British Columbia	4,314	6,263	6,491	10,953	9,142	10,650	10,316
Yukon	706	704	835	795	985	1,487	1,348
Northwest Territories	—	—	—	—	—	—	—
Canada	18,475	22,784	24,491	40,498	34,616	47,271	52,414

<sup>1</sup>Fiscal year ending March 31.

## 6.7 War veterans allowances and pensions

Province	Recipients of allowances						
	1976	1977	1978	1979	1980	1981	1982
Newfoundland	4,947	5,157	5,389	5,453	5,663	5,508	5,291
Prince Edward Island	1,366	1,403	1,483	1,479	1,205	1,459	1,402
Nova Scotia	8,248	8,436	8,766	8,830	8,307	8,914	8,564
New Brunswick	5,640	5,942	6,192	6,230	6,885	6,270	6,024
Quebec	10,877	11,313	11,505	11,422	11,379	11,570	11,115
Ontario	29,649	30,466	31,389	31,098	30,859	31,176	29,957
Manitoba	5,320	5,578	5,643	5,662	5,925	5,618	5,397
Saskatchewan	3,496	3,666	3,831	3,807	3,672	3,783	3,634
Alberta	6,005	6,078	6,201	6,112	7,765	5,921	5,688
British Columbia	13,128	13,713	13,997	13,666	13,487	13,391	12,685
Canada <sup>1</sup>	89,371	92,498	95,221	94,662	93,147	94,518	90,804

Province	Payments (\$'000,000)						
	1976	1977	1978	1979	1980	1981	1982
Newfoundland	12.0	12.8	14.3	15.4	17.9	18.7	19.6
Prince Edward Island	3.5	3.9	4.3	4.7	3.8	5.6	8.3
Nova Scotia	19.4	21.1	23.5	25.8	26.3	31.7	35.6
New Brunswick	14.4	16.4	18.1	19.9	21.8	24.9	28.5
Quebec	22.2	24.9	27.2	30.0	32.1	38.6	47.3
Ontario	52.2	58.1	65.7	72.2	76.8	91.1	112.1
Manitoba	8.4	9.9	10.8	12.1	9.8	15.7	18.1
Saskatchewan	6.6	7.5	8.6	9.5	9.2	11.9	13.7
Alberta	11.1	12.2	13.6	14.7	19.4	17.5	20.2
British Columbia	21.3	24.5	27.4	29.6	31.5	37.1	42.2
Canada <sup>1</sup>	172.7	193.2	216.0	236.6	248.5	296.7	351.5

## 6.7 War veterans allowances and pensions (concluded)

	Payments, veteran disability and dependent pensioners (\$'000,000)						
	1976	1977	1978	1979	1980	1981	1982
Newfoundland	4.5	5.1	5.2	6.2	5.7	7.4	8.3
Prince Edward Island	4.3	4.8	5.1	5.6	6.0	6.7	7.5
Nova Scotia	23.3	26.1	27.6	30.1	32.4	36.0	39.5
New Brunswick	14.4	16.1	16.9	18.4	19.9	22.0	24.2
Quebec	37.3	41.8	43.6	47.1	52.5	55.2	61.0
Ontario	115.9	128.4	135.6	147.0	162.2	174.3	189.8
Manitoba	26.7	30.0	31.5	33.9	31.0	39.4	42.9
Saskatchewan	14.2	15.6	16.5	17.7	18.7	20.7	22.6
Alberta	24.4	27.1	28.5	30.8	32.6	36.0	39.5
British Columbia	57.3	63.0	66.1	72.3	77.2	86.9	94.2
Canada <sup>1</sup>	346.6	383.7	403.2	436.6	466.6	515.1	561.0

<sup>1</sup>Includes persons who reside in the territories and outside Canada.

6.8 Analysis of federal expenditures on income security programs<sup>1</sup>, selected years

Year <sup>2</sup>	Expenditures <sup>3</sup> \$'000,000	Per cent of total social security expenditures	Per capita \$	Per capita increase from previous year %
1961	1,308	39.8	7.26	0.4
1966	1,828	39.2	9.25	3.2
1971	3,038	29.9	14.20	5.8
1976	6,719	25.9	29.58	11.0
1977	7,332	26.2	31.74	7.3
1978	7,956	25.2	34.09	7.4
1979	9,436	26.4	40.08	17.6
1980	10,001	26.2	42.12	5.1
1981	11,448	26.0	47.68	13.2
1982	12,896	24.8	52.78	10.7

<sup>1</sup>Includes family allowances, child tax credits (after 1978), old age security (OAS, GIS [after 1966] and SPA [after 1975]), manpower training (after 1966), assistance to Indians (after 1967) and veterans benefits.

<sup>2</sup>Fiscal year ending March 31.

<sup>3</sup>Based on retroactive adjustments and improved documentation of expenditures.

## 6.9 Direct financial assistance paid under the Canada Assistance Plan (CAP), selected years

Province or territory	Recipients, including dependents						
	1974	1975	1977	1979	1980	1981	1982
Newfoundland	63,250	63,127	52,424	39,312	48,500	50,444	54,672
Prince Edward Island	7,291	8,401	8,685	8,480	9,367	10,100	11,250
Nova Scotia	47,597	52,358	55,932	50,055	58,819	62,363	64,569
New Brunswick	51,879	55,604	67,130	65,040	66,312	67,446	62,736
Quebec	395,820	416,558	457,053	478,277	511,925	532,865	561,736
Ontario	317,283	336,415	338,909	382,224	377,751	389,757	406,849
Manitoba	60,681	56,616	55,251	47,594	45,600	46,905	47,752
Saskatchewan	44,405	45,332	38,807	42,130	41,390	43,766	48,396
Alberta	80,609	77,970	86,464	80,823	74,952	78,078	91,709
British Columbia	137,192	162,349	162,000	146,940	122,848	128,026	144,896
Yukon	2,622	5,711	5,329	6,303	1,075	1,219	1,496
Northwest Territories	—	—	—	—	5,190	7,356	6,541
Canada	1,208,629	1,280,441	1,327,984	1,347,178	1,363,728	1,418,325	1,502,602
	Payments (federal-provincial cost-shared) \$'000,000						
	1974	1975	1977	1979	1980	1981	1982
Newfoundland	33.5	45.8	49.8	53.7	59.1	66.5	66.7
Prince Edward Island	3.9	5.7	8.4	11.2	12.8	16.0	19.6
Nova Scotia	35.6	39.8	54.7	65.7	73.6	82.4	97.8
New Brunswick	42.7	55.6	106.0	104.8	107.2	126.3	142.7
Quebec	368.9	427.8	625.5	780.3	886.8	1,038.5	1,192.8
Ontario	311.2	411.7	494.9	605.9	653.8	737.7	845.8
Manitoba	42.7	46.5	52.9	62.2	68.7	68.7	74.2
Saskatchewan	47.7	42.1	70.3	76.0	83.5	88.0	99.4
Alberta	77.0	88.9	130.3	152.5	159.8	178.7	261.4
British Columbia	115.2	203.9	212.0	260.2	324.5	385.9	433.2
Yukon	0.4	0.5	0.5	0.9	0.8	0.5	2.2
Northwest Territories	0.5	6.5	3.1	5.4	5.5	8.6	8.2
Canada	1,079.4	1,374.7	1,808.3	2,179.0	2,430.0	2,797.7	3,243.4

### 6.10 Federal-provincial spending on financial assistance programs, cost-shared under CAP

Year <sup>1</sup>	Expenditures <sup>2</sup> \$'000,000	Per cent of total social security expenditures	Per capita \$	Per capita increase from previous year %
1971	834	8.2	38.96	28.6
1972	1,001	8.1	46.20	18.6
1973	1,040	7.3	47.52	2.9
1974	1,088	6.6	49.12	3.4
1975	1,380	6.5	61.35	24.9
1976	1,610	6.4	70.57	15.0
1977	1,810	6.5	78.37	11.1
1978	1,986	6.3	85.07	10.9
1979	2,181	6.1	92.63	8.9
1980	2,430	6.4	102.36	10.5
1981	2,798	6.3	116.88	14.2
1982	3,243	6.3	134.06	14.7

<sup>1</sup>Fiscal year ending March 31.

<sup>2</sup>Based on retroactive adjustments and improved documentation of expenditures.

### 6.11 Income insurance<sup>1</sup> under the Canada Pension Plan and Quebec Pension Plan

Year <sup>2</sup>	Retirement pensions	Disability and survivors benefits \$'000,000	Total CPP QPP \$'000,000	Per cent of total social security expenditures	Per capita \$	Per capita increase %	Total beneficiaries CPP/QPP pensions '000	Increase in beneficiaries %
1972	83	110	193	1.6	8.90	57.5	413.2	39.7
1973	114	159	273	1.9	12.49	40.3	533.1	29.0
1974	162	223	385	2.3	17.36	39.0	657.3	23.3
1975	241	294	535	2.5	23.79	37.0	787.7	19.8
1976	391	409	800	3.2	35.06	47.4	1,006.9	27.8
1977	606	514	1,120	4.0	48.49	38.3	1,123.2	11.6
1978	816	618	1,444	4.6	61.86	27.6	1,241.3	10.5
1979	1,055	746	1,801	5.0	76.48	23.6	1,364.4	9.9
1980	1,337	876	2,214	5.8	93.22	21.9	1,403.9	2.7
1981	1,668	1,148	2,816	6.4	117.28	25.8	1,671.3	19.0
1982	2,071	1,244	3,315	6.4	135.67	15.7	1,784.9	6.7

<sup>1</sup>Analysis based on retroactive adjustments and improved documentation.

<sup>2</sup>Fiscal year ending March 31.

### 6.12 Federal and provincial expenditures<sup>1</sup> on income insurance<sup>2</sup>

Year <sup>3</sup>	Expenditures \$'000,000	Per cent of total social security expenditures	Per capita \$	Change from previous year %
1971	1,242	12.2	58	28.1
1972	2,247	18.2	104	78.8
1973	2,540	17.8	116	11.9
1974	2,818	17.0	127	9.6
1975	4,060	19.1	181	41.7
1976	4,597	18.3	201	11.6
1977	5,213	18.6	226	12.0
1978	6,269	19.8	269	19.0
1979	7,073	19.8	300	11.9
1980	7,059	18.5	297	-1.0
1981	8,294	18.9	345	16.2
1982	10,018	20.1	413	19.7

<sup>1</sup>Analysis based on retroactive adjustments.

<sup>2</sup>CPP, QPP, all programs of UIC and worker compensation.

<sup>3</sup>Fiscal year ending March 31.

6.13 Provincial welfare programs not cost-shared with the federal government<sup>1</sup>

Year	Expenditures \$'000,000	Per cent of total social security expenditures <sup>2</sup>	Per capita \$	Per capita change from previous year %
1961	168	5.12	9.16	13.1
1966	271	5.81	13.71	26.8
1967	266	4.95	13.21	-3.2
1968	281	4.24	13.69	3.7
1971	245	2.42	11.47	-5.8
1972	268	2.16	12.35	7.7
1973	610	4.28	27.86	125.5
1974	966	5.82	43.63	56.6
1975	1,234	5.89	55.76	27.8
1976	1,351	5.38	59.19	6.2
1977	1,426	5.11	61.74	4.4
1978	2,080	6.60	89.16	44.4
1979	2,283	6.40	96.96	8.8
1980	2,523	6.61	106.23	9.6
1981	2,720	6.15	113.27	6.6
1982	3,841	7.38	157.20	38.8

<sup>1</sup>Analysis based on retroactive adjustments.  
<sup>2</sup>Expenditures on social security by all levels of government.

6.14 Social services programs,<sup>1</sup> federal and federal-provincial

Year	Expenditures (\$'000,000)							
	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.
1969	3.7	2.2	8.7	5.9	89.3	80.0	10.3	8.0
1970	5.1	3.7	12.0	7.7	110.9	86.4	10.1	13.5
1971	5.8	4.1	13.4	6.2	154.4	124.7	14.2	11.7
1972	7.7	4.7	16.4	10.1	205.0	132.5	25.0	13.3
1973	9.6	5.0	16.9	9.8	219.5	148.2	26.5	17.5
1974	13.8	6.4	19.6	15.8	269.1	116.1	33.7	22.2
1975	16.5	8.4	23.2	13.6	343.0	145.1	33.7	27.3
1976	22.8	10.1	34.9	19.7	442.1	295.2	46.5	42.7
1977	27.2	13.1	41.2	29.2	578.9	343.7	56.0	60.8
1978	27.3	5.4	35.2	21.9	448.7	256.3	56.3	51.5
1979	21.8	8.1	31.5	18.1	520.5	258.8	60.3	46.3
1980	22.2	7.7	38.2	26.2	560.2	325.3	63.8	40.9
1981	34.7	5.7	42.7	30.2	628.0	359.5	77.8	64.6
1982	45.9	12.9	50.0	39.1	727.9	400.0	105.7	85.6
	Alta.	BC	Yukon	NWT	Canada	Part of total social security %	Payment change from previous year %	
1969	14.0	22.3	0.5	—	244.7	3.19	9.88	
1970	14.9	25.0	—	—	289.2	3.37	18.25	
1971	18.5	37.7	1.2	—	391.9	3.92	35.51	
1972	21.1	31.4	0.6	—	467.8	3.78	19.37	
1973	28.4	33.0	1.4	—	515.8	3.62	10.25	
1974	32.9	49.7	1.6	2.2	583.3	3.52	13.09	
1975	40.1	74.2	1.6	5.6	732.3	3.44	25.55	
1976	86.0	152.6	3.4	2.7	1,158.7	4.62	58.22	
1977	97.5	145.9	2.0	3.9	1,401.1	5.02	20.92	
1978	90.0	145.2	1.9	6.3	1,145.9	3.63	-18.21	
1979	102.4	145.6	2.3	10.6	1,225.3	3.43	-6.92	
1980	110.3	187.9	2.7	6.3	1,391.6	3.64	13.57	
1981	148.4	235.4	2.0	7.2	1,638.9	3.71	17.77	
1982	221.3	244.1	5.6	11.2	1,949.5	3.75	18.95	

<sup>1</sup>CAP homes for special care, social services for registered Indians, vocational rehabilitation of disabled persons and other welfare services.

### 6.15 Social security expenditures<sup>1</sup> including health, by program (million dollars)

Program	1977	1978	1979	1980	1981	1982
Family allowances	1,979.8	2,122.4	2,093.0	1,725.8	1,850.9	2,019.5
Youth allowances and Quebec schooling allowances	—	—	—	—	—	—
Child tax credits	—	—	874.4	933.2	1,013.2	1,101.2
Old age security	3,318.9	3,668.6	4,130.6	4,679.0	5,322.1	6,140.6
Guaranteed income supplement	1,017.1	1,077.6	1,234.2	1,494.4	1,918.1	2,241.9
Spouses allowances	100.6	115.0	126.3	146.1	177.7	202.8
Canada manpower institutional training allowances	200.2	190.8	117.0	84.2	103.6	96.3
Canada manpower industrial training	59.5	76.7	83.7	101.3	113.6	103.1
Registered Indians, social assistance	78.7	85.7	104.0	122.0	142.0	166.6
War veterans allowances	193.2	216.0	236.6	248.5	296.7	351.5
Veteran disability and dependent pensioners	383.7	403.2	436.6	466.6	515.1	561.0
CPP and QPP, retirement beneficiaries	606.5	816.3	1,054.9	1,337.3	1,668.2	2,070.5
CPP and QPP, surviving spouse pensioners	276.8	335.6	408.0	488.9	590.2	712.0
CPP and QPP, disability pensioners	149.9	184.0	228.6	269.4	328.6	392.4
CPP and QPP, orphans and dependent children of disabled pensioners	87.0	97.9	109.1	118.1	128.8	140.0
UIC, unemployment beneficiaries	3,108.3	3,697.7	3,917.1	3,364.4	3,890.5	4,655.7
UIC, sickness benefits	141.1	156.4	155.6	144.6	156.7	167.6
UIC, maternity benefits	150.1	177.2	199.6	217.4	242.8	282.8
UIC, retirement benefits	14.8	13.8	15.0	15.4	16.3	17.7
UIC, fishing benefits	38.7	55.6	68.8	74.7	90.2	102.0
UIC, persons in manpower training	27.0	50.0	118.4	137.3	161.5	172.0
UIC, work-sharing benefits	—	—	—	—	—	0.9
Workers compensation, temporary disability	200.4	230.4	301.2	312.8	388.5	469.7
Workers compensation, pensions for permanent disability and survivors	411.8	454.4	496.8	575.7	704.1	841.6
Old age pensions <sup>2</sup>	—	—	—	—	—	—
Old age assistance <sup>2</sup>	—	—	—	—	—	—
Blind persons allowances <sup>2</sup>	0.8	0.7	0.8	0.4	0.2	—
Disabled persons allowances <sup>2</sup>	1.2	0.7	1.0	0.3	0.2	—
Unemployment assistance <sup>2</sup>	0.1	—	—	—	—	—
CAP, direct financial assistance <sup>2</sup>	1,808.3	1,984.1	2,179.0	2,430.0	2,797.7	3,243.4
CAP, homes for special care <sup>2</sup>	842.5	518.6	495.0	525.2	545.2	734.9
CAP, child welfare <sup>2</sup>	135.2	151.5	164.9	192.0	225.0	308.9
CAP, other welfare services and work activity <sup>2</sup>	353.4	406.8	462.2	566.6	738.3	820.8
Vocational rehabilitation of disabled persons <sup>2</sup>	47.1	44.5	62.6	73.0	63.3	78.6
Registered Indians, social services	22.8	24.5	40.5	34.7	47.3	52.4
Mothers allowances, provincial-municipal cost-shared	—	—	—	—	—	—
Provincial tax credits and rebates	823.8	883.6	947.4	1,104.7	1,278.2	1,302.5
Other provincial welfare programs	602.3	1,196.4	1,335.5	1,417.9	1,441.5	2,538.3
Hospital insurance and diagnostic services	2,808.7	3,130.0	3,588.9	4,100.6	4,579.2	5,110.6
Hospital insurance and diagnostic services, provincial costs	2,768.1	2,847.7	2,980.9	3,004.5	3,801.7	4,607.6
Medical care insurance	955.7	1,077.7	1,235.7	1,411.9	1,576.6	1,759.6
Medical care insurance, provincial costs	964.9	897.5	1,017.0	1,089.1	1,288.7	1,625.8
Extended health care, EPF	—	465.2	520.3	581.2	646.1	723.0
Other health programs, (including cost-shared health expenses under CAP)	423.7	539.2	632.5	465.3	440.9	658.1
Worker compensation, hospital and medical care (provincial compensation)	164.0	174.2	198.7	217.2	257.2	316.6
Other hospital care, provincial	884.7	982.8	807.8	993.6	964.3	900.9
Other provincial health	1,356.1	1,541.1	2,012.1	2,385.5	3,019.7	3,618.5
Net municipal welfare	253.5	292.3	326.8	314.2	402.3	437.1
Net municipal health	173.8	157.3	174.2	215.7	257.8	264.9
<b>Total, expenditures<sup>3</sup></b>	<b>27,934.9</b>	<b>31,541.7</b>	<b>35,693.2</b>	<b>38,179.3</b>	<b>44,190.8</b>	<b>52,105.6</b>

<sup>1</sup>Federal payments, unless otherwise noted.<sup>2</sup>Federal-provincial cost-shared.<sup>3</sup>Based on retroactive adjustments and improved documentation of expenditures.

## 6.16 Total social security expenditures, including health, all government levels, with indexes

Year <sup>1</sup>	Social security expenditures <sup>2</sup> \$'000,000	Gross national product \$'000,000	Net national income \$'000,000	Total current government expenditures \$'000,000
1960	3,097	37,418	28,100	10,728
1961	3,288	38,398	28,810	12,120
1962	3,543	40,450	30,494	13,476
1963	3,809	43,473	32,745	14,160
1964	3,974	47,089	35,522	14,968
1965	4,328	51,307	38,372	16,492
1966	4,666	56,934	42,521	18,260
1967	5,370	62,981	47,130	21,512
1968	6,620	67,531	50,631	24,680
1969	7,672	74,469	56,245	28,680
1970	8,576	81,409	61,725	31,392
1971	10,148	86,898	64,883	37,392
1972	12,364	97,028	73,007	42,884
1973	14,259	112,434	82,633	53,162
1974	16,591	128,923	98,634	65,831
1975	21,286	151,454	117,458	68,144
1976	25,100	171,423	134,352	84,544
1977	27,935	195,878	151,673	91,920
1978	31,542	214,173	164,349	104,408
1979	35,693	237,177	183,547	116,208
1980	38,179	267,718	208,176	131,944
1981	44,217	298,054	229,028	149,412
1982	52,098	331,358	260,000	172,172

Indicators of social security expenditures per \$100

Per capita current dollars

	Gross national product	Net national income	Total current government expenditures	
1960	8.28	11.02	28.87	175.73
1961	8.56	11.41	27.13	182.58
1962	8.76	11.62	26.29	192.95
1963	8.76	11.63	26.90	203.62
1964	8.44	11.19	26.55	208.50
1965	8.44	11.28	26.25	222.89
1966	8.20	10.97	25.56	235.95
1967	8.53	11.39	24.96	266.57
1968	9.80	13.07	26.82	322.78
1969	10.30	13.64	26.75	368.61
1970	10.53	13.89	27.32	406.25
1971	11.68	15.64	27.14	474.19
1972	12.74	16.94	28.83	570.91
1973	12.68	17.26	26.82	651.63
1974	12.87	16.82	25.20	749.12
1975	14.05	18.12	31.24	946.41
1976	14.64	18.68	29.69	1,100.10
1977	14.26	18.42	30.39	1,209.30
1978	14.73	19.19	30.21	1,351.23
1979	15.05	19.45	30.71	1,516.02
1980	14.26	18.34	28.94	1,606.60
1981	14.84	19.31	29.59	1,840.32
1982	15.72	20.04	30.26	2,132.29

<sup>1</sup>Fiscal year ending March 31.<sup>2</sup>Expenditures for 1973-79 revised.6.17 Social security expenditures by level of government<sup>1</sup>

Year <sup>2</sup>	Expenditures (\$'000,000)											
	Welfare				Health				Total social security			
	All levels	Federal	Provincial	Municipal	All levels	Federal	Provincial	Municipal	All levels	Federal	Provincial	Municipal
1957	1,614	1,289	291	34	504	105	328	70	2,118	1,395	619	104
1962	2,384	1,946	395	43	1,159	396	697	67	3,543	2,342	1,092	109
1967	3,307	2,613	635	59	2,063	728	1,267	69	5,370	3,341	1,902	128
1972	7,478	6,062	1,284	133	4,886	2,012	2,806	68	12,364	8,074	4,089	201
1977	11,435	13,259	3,923	253	10,500	4,188	6,138	174	27,935	17,447	10,061	427
1978	19,729	14,740	4,697	292	11,813	5,212	6,443	157	31,542	19,952	11,140	450
1979	22,525	16,958	5,241	327	13,168	5,977	7,016	174	35,693	22,935	12,257	501
1980	23,716	17,511	5,891	314	14,463	6,557	7,690	216	38,179	24,068	13,581	530
1981	27,387	20,259	6,725	402	16,831	7,241	9,332	258	44,217	27,501	16,057	660
1982	32,512	23,468	8,608	437	19,586	8,251	11,069	265	52,098	31,719	19,677	702

### 6.17 Social security expenditures by level of government<sup>1</sup> (concluded)

Year <sup>2</sup>	Per cent distribution											
	Welfare				Health				Total social security			
	All levels	Federal	Provincial	Municipal	All levels	Federal	Provincial	Municipal	All levels	Federal	Provincial	Municipal
1957	100.0	79.9	18.0	2.1	100.0	20.9	65.1	13.9	100.0	65.9	29.2	4.9
1962	100.0	81.6	16.6	1.8	100.0	34.2	60.1	5.7	100.0	66.1	30.8	3.1
1967	100.0	79.0	19.2	1.8	100.0	35.3	61.4	3.3	100.0	62.2	35.4	2.4
1972	100.0	81.0	17.2	1.8	100.0	41.2	57.4	1.4	100.0	65.3	33.1	1.6
1977	100.0	76.0	22.5	1.5	100.0	39.9	58.5	1.6	100.0	62.5	36.0	1.5
1978	100.0	74.7	23.8	2.4	100.0	44.1	54.5	1.4	100.0	63.2	35.3	1.4
1979	100.0	75.3	23.3	1.5	100.0	45.4	53.3	1.2	100.0	64.3	34.3	1.4
1980	100.0	73.8	24.8	1.3	100.0	45.3	53.2	1.5	100.0	63.0	35.6	1.4
1981	100.0	74.0	24.6	1.4	100.0	43.0	55.4	1.5	100.0	62.2	36.3	1.5
1982	100.0	72.2	26.5	1.3	100.0	42.1	56.5	1.4	100.0	60.9	37.8	1.3

<sup>1</sup>Revised on basis of retroactive adjustments.

<sup>2</sup>Fiscal year ending March 31.

### 6.18 Indexes of welfare, health and total social security expenditures, all levels of government, selected years

Year <sup>1</sup>	Per capita expenditures in constant (1971) dollars			Annual change in per capita constant (1971) dollars			Ratio of expenditures per \$100 of personal income		
	Welfare	Health	Total social security	Welfare	Health	Total social security	Welfare	Health	Total social security
1957	145	45	190	8.3	7.2	8.0	6.9	2.1	9.0
1962	174	85	259	0.5	17.6	5.5	7.9	3.9	11.8
1967	195	121	316	6.3	11.7	8.3	7.2	4.5	11.7
1972	342	223	565	21.0	8.6	15.8	10.1	6.6	16.7
1977	498	300	797	3.4	3.6	3.5	11.2	6.8	18.0
1978	512	307	819	3.0	2.4	2.7	11.5	6.9	18.4
1979	534	312	846	4.2	1.7	3.2	11.9	7.0	18.9
1980	510	311	821	-4.5	-0.3	-2.9	11.3	6.9	18.1
1981	525	323	848	3.0	3.8	3.3	11.5	7.1	18.6
1982	544	327	871	3.6	1.5	2.8	11.6	7.0	18.6

<sup>1</sup>Fiscal year ending March 31.

### 6.19 Analysis of social security expenditures, all levels of government, selected years

Year	Sector	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Yukon	NWT	Canada <sup>1</sup>
Total expenditures, current (million dollars)														
1972	Welfare	206	48	297	243	2,138	2,492	345	303	495	882	6	4	7,478
	Health	89	20	155	115	1,356	1,905	216	186	395	439	2	8	4,886
	Total social security	296	68	453	358	3,494	4,397	561	489	890	1,322	8	12	12,364
1977	Welfare	491	118	676	625	4,895	5,901	800	653	1,097	2,094	19	21	17,435
	Health <sup>2</sup>	222	41	340	250	2,969	3,724	465	412	908	1,129	10	26	10,500
	Total social security	713	159	1,017	875	7,864	9,625	1,265	1,065	2,005	3,224	29	48	27,935
1979	Welfare	646	151	893	790	6,400	7,638	1,019	888	1,377	2,640	20	36	22,525
	Health <sup>2</sup>	261	52	412	319	3,713	4,720	531	513	1,171	1,436	14	24	13,168
	Total social security	907	203	1,305	1,109	10,113	12,358	1,550	1,400	2,548	4,076	33	60	35,693
1980	Welfare	655	156	916	829	6,955	7,848	1,072	950	1,475	2,747	25	38	23,716
	Health	285	59	456	341	4,058	4,988	573	591	1,329	1,661	13	28	14,463
	Total social security	941	215	1,372	1,170	11,013	12,836	1,645	1,541	2,804	4,408	38	66	38,179

6.19 Analysis of social security expenditures, all levels of government, selected years  
(concluded)

Year	Sector	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	Yukon	NWT	Canada <sup>1</sup>
Total expenditures, current (million dollars)														
1981	Welfare	757	183	1,064	936	8,059	8,952	1,258	1,094	1,771	3,203	26	40	27,387
	Health	331	65	527	394	4,644	5,672	654	656	1,701	2,140	15	32	16,831
	Total social security	1,088	248	1,591	1,330	12,703	14,624	1,912	1,750	3,472	5,343	41	71	44,218
1982	Welfare	874	212	1,246	1,099	10,207	10,204	1,405	1,273	2,131	3,721	33	45	32,512
	Health	379	74	625	465	5,177	6,605	765	755	2,011	2,672	28	36	19,586
	Total social security	1,253	286	1,871	1,564	15,384	16,809	2,170	2,028	4,142	6,393	61	81	52,098
Per capita expenditures, constant (1971) dollars														
1972	Welfare	388	428	372	377	350	318	345	325	298	396	290	107	342
	Health	168	177	194	179	222	243	216	200	238	197	104	213	223
	Total social security	556	604	566	556	572	562	561	525	537	593	394	320	565
1977	Welfare	577	652	535	604	516	469	515	464	389	558	587	325	498
	Health <sup>2</sup>	261	228	270	242	313	294	299	293	322	301	292	403	300
	Total social security	838	881	805	846	829	764	815	757	710	858	878	729	797
1979	Welfare	631	688	590	632	569	503	551	520	389	578	508	460	534
	Health <sup>2</sup>	255	237	272	255	330	311	287	300	331	315	348	313	312
	Total social security	886	925	862	887	899	814	837	821	719	893	856	773	846
1980	Welfare	579	647	550	602	565	470	532	504	370	541	581	443	510
	Health	252	243	274	247	330	299	285	314	334	327	307	336	311
	Total social security	832	889	824	849	894	769	817	818	704	868	888	779	821
1981	Welfare	598	678	573	608	588	480	563	517	386	554	558	428	525
	Health	261	241	284	256	339	304	293	310	370	370	326	347	323
	Total social security	859	919	856	864	926	784	856	828	756	924	883	775	848
1982	Welfare	626	705	599	643	658	482	558	535	385	553	578	396	544
	Health	271	247	300	272	334	312	304	317	363	397	487	321	327
	Total social security	898	951	899	916	991	794	862	852	748	950	1,065	717	871

<sup>1</sup>Some totals may not add due to rounding.  
<sup>2</sup>Data for 1977 and 1979 revised on basis of retroactive adjustments.

Sources

6.1 – 6.6, 6.8 – 6.19 Information Systems Directorate, Department of National Health and Welfare.  
6.7 Public Affairs Directorate (Ottawa), Department of Veterans Affairs.



**CHAPTER 7** 

---

**HOUSING AND  
CONSTRUCTION**



## UPDATE

---

In 1983 there were 8.7 million households in Canada, comprising 5.5 million owners and 3.2 million renters. A fairly recent development has been an increase in owners of registered condominiums, particularly in Ontario, British Columbia and Alberta.

Because of lower interest rates, better economic conditions, and federal and provincial housing programs, dwelling starts increased 29% to 162,645 in 1983 from the 1982 level of 125,860, the lowest since 1967. Throughout 1983, the pattern of housing activity was heavily influenced by a federal Canadian home-ownership stimulation plan (CHOSP) providing \$3,000 toward buying or building a new unit before January 1984.

At the provincial level in 1983 housing starts were higher everywhere except in Alberta. They were up by almost 200% in Manitoba, New Brunswick and Prince Edward Island.

The overall volume of mortgage lending more than doubled. Total mortgages from approved lenders increased by 112.1% to \$26.3 billion in 1983 from \$12.4 billion in 1982.

## CHAPTER 7

---

# HOUSING AND CONSTRUCTION

---

<b>7.1</b>	<b>Housing supply and costs</b>	<b>231</b>
7.1.1	House-building activity	231
7.1.2	Price changes	231
7.1.3	Home values	231
<b>7.2</b>	<b>Housing markets</b>	<b>232</b>
7.2.1	Rental units	232
7.2.2	Single detached dwellings	232
7.2.3	Condominiums	232
7.2.4	Mortgage lending	233
<b>7.3</b>	<b>Canada Mortgage and Housing Corp.</b>	<b>233</b>
7.3.1	Housing legislation and policy	233
7.3.2	Market housing support	233
7.3.3	Social housing	234
7.3.4	Rehabilitation and conservation	235
7.3.5	Community services	235
<b>7.4</b>	<b>Census and survey data on housing</b>	<b>235</b>
7.4.1	Dwellings and housing growth rates	235
7.4.2	Dwelling types, tenure and size	235
7.4.3	Period of construction	236
7.4.4	Heating fuel	236
7.4.5	Household facilities and equipment	237
<b>7.5</b>	<b>Construction</b>	<b>237</b>
7.5.1	Value of construction work	237
7.5.2	Building permits issued	238
<b>7.6</b>	<b>Capital expenditures</b>	<b>238</b>
<b>7.7</b>	<b>Price indexes</b>	<b>238</b>

---

## TABLES

7.1, 7.2	Dwelling unit construction	240
7.3	New housing price indexes	242
7.4-7.7	Housing characteristics	242
7.8	Construction and occupancy periods	244
7.9	Principal home-heating fuels	245
7.10	Household facilities and equipment	246
7.11-7.14	Construction price indexes	247
7.15-7.17	Value of construction work	249
7.18-7.20	Building permits issued	250
7.21-7.23	Capital and repair expenditures	252
7.24, 7.25	Construction work, by type of structure	254
7.26	Machinery and equipment price indexes	256

## CHARTS

Chart 7.1	Dwelling units completed	234
Chart 7.2	Home-heating fuels	237

## CHAPTER 7

# HOUSING AND CONSTRUCTION

### 7.1 Housing supply and costs

#### 7.1.1 House-building activity

**Housing starts** declined during 1982 to the lowest level since 1961 against a background of rising unemployment throughout the year and rising mortgage interest rates in the first seven months. The year ended, however, on an upward trend with a strong increase of starts in the fourth quarter. Federal and provincial housing programs, introduced to offset the effect of high interest rates on housing, helped to support the level of activity.

The overall decline by 29.3% in 1982 to 125,860 housing starts followed an upswing during 1981, when there were 177,973 or about 12% more than the 158,600 registered in 1980. The recovery in 1981 had reversed a four-year contraction in the housing sector.

British Columbia and Alberta recorded the sharpest declines in 1982. In British Columbia activity fell by 52.4% to 19,807 starts from a record level of 41,585 in 1981. In Alberta the decline was 30.4%.

Among the provinces Saskatchewan and the Atlantic provinces experienced fewer starts in 1981 than in 1980, but Saskatchewan and Prince Edward Island were the only provinces showing increases in 1982.

**Completions** also decreased during 1982 by 23.5% to 133,942 units from 174,996 units in 1981. All of the decline in completions was concentrated in the single detached sector which fell by 44.4% to 54,720 units in 1982. Completion of multiples actually increased by 3.4% to 79,222 units as MURB units started in 1981 were completed.

A building boom in the first half of 1981 kept housing completions for the year near the 1980 level. Completions were composed of 98,412 single detached and 76,584 multiple units.

#### 7.1.2 Price changes

House-building costs and the price of land and completed housing moderated by the end of 1982 in contrast to the year's initial rapid price escalation. The pace of inflation in overall housing costs slowed by the fourth quarter as materials costs and land prices declined and the price of new housing stabilized.

The previously rapid escalation in residential sale prices halted in 1982. Sale prices were down 4.8% in

Windsor and 21.0% in Vancouver. Winnipeg prices increased the most, rising 9.3%. Net out-migration from the western provinces followed several years of population gains through migration from other provinces. This coupled with high unemployment nationally reduced home buyer demand.

The price of the typical new single detached house in metropolitan areas had risen by 12% in 1981 relative to average prices in 1980. This was up from price rises of 4% in 1979 and 8% in 1978. Prices had gone up most rapidly in Vancouver where they climbed by 26% on an annual basis. Almost all of this increase occurred in the first quarter of 1981. By the fourth quarter prices had dropped 16% from their first quarter level. In Montréal house prices grew by 14% and in Toronto by 17%, while in Windsor prices fell by 2% in 1981 from 1980. Windsor was the only centre in which prices actually fell.

**Land costs.** In contrast to higher house-construction costs and an average increase of 11% in land prices in 1980-81, the land component in the price of a new house declined by an average of 2.4% in 1982. In 1981 land prices in most centres grew much more slowly than the price of the house alone. The major exception was Vancouver, where land prices grew about 50% or five times faster than the price of the house alone. In contrast, in Toronto the price of the house alone grew by 25% as opposed to 2.5% for land only. In 1982, declining housing starts were associated with significant price drops in land, with the largest decline of 21.5% in Vancouver.

**Materials and labour.** Labour costs increased in 1982 for both residential and non-residential types of construction. Union wage rates in the residential construction trades increased 9%, less than the 9.3% average rise in 1981. Materials prices rose more quickly for non-residential building; for residential construction the decline in housing starts led to inventory build-ups, depressing prices. In 1981 the costs of building materials rose by 8%.

#### 7.1.3 Home values

In the 1981 Census, the average value of owner-occupied private non-farm dwellings was given as close to \$74,000. However, more than half of all dwellings or 55.6% were valued by their owners

at less than \$65,000 and about one in five at \$100,000 or more.

The average home value was highest in British Columbia where 58% of homes had an owner-estimated value of \$100,000 or more. Alberta had the second highest at about \$94,000. Average owner-estimated home values were lowest in the Atlantic provinces, ranging from \$38,610 in New Brunswick to \$42,995 in Nova Scotia.

Ontario had 37% of Canadian homeowners in 1981 and the average owner-expected value was \$78,218, slightly above the national figure of \$73,955. Quebec, Manitoba and Saskatchewan homeowners expected an average of just over \$51,000 if they were to sell. In Yukon, the average estimated value was \$61,528 and in Northwest Territories, \$49,123.

## 7.2 Housing markets

### 7.2.1 Rental units

A predominant feature of housing markets in Canada's largest metropolitan areas has been the relatively low vacancy levels in the rental stock. Canada Mortgage and Housing Corp. (CMHC) has been conducting a semi-annual survey every April and October of rental units in structures containing six or more units.

An increased volume of completions of multiple-unit buildings in 1982 eased some of the pressures in the rental market. This was reflected in the increased average vacancy rate, excluding inventories, which rose to 2.1% in October 1982 from 1.2% in October 1981. Some further easing of rental markets was anticipated because of an increase in completed and unoccupied apartments at the end of 1982.

Housing analysts stated that to operate smoothly rental markets required the level of vacancies to be 3%, often referred to as the "frictional rate". Unless there are some vacant units, movement into and within the market is impeded.

Rent levels were going up but many of the metropolitan areas still had rent controls. Although these controls did not apply to new units, by affecting the overall rental level they tended to depress the rents charged for new accommodation. New units did come under rent controls, however, after an initial grace period. Rent controls are provincially imposed and there was no general trend across the country.

The choice confronting potential rental entrepreneurs was between the likely return on buildings for rent and on investing their capital elsewhere. Rental development has not rated favourably because of high interest rates and increasing construction costs. Before 1978 the government's assisted rental program (ARP) paid some of the difference between an economic return and prevailing rents. This program was eventually discontinued, although there was still a tax incentive available for rental investors which allowed them to write off rental losses, mainly depreciation, against other income.

In individual markets the problems were most acute in Toronto and the growth areas in Western Canada. The vacancy rate for Toronto was 0.3% in 1981, for Vancouver and Victoria 0.1% and in Calgary 0.7%. Prolonged low vacancy rates and pressures to push up rent could have discouraged the formation of new households particularly the non-family variety formed by young persons previously living at their parental homes.

### 7.2.2 Single detached dwellings

First-time buyers do not usually have much cash for a down payment, so their capacity to buy a house is determined largely by the amount of mortgage debt they can carry. This in turn depends largely on household income and the cost of mortgage funds. Thus higher house prices or increased mortgage interest rates are major factors in reducing access to home ownership.

Because variations in incomes across market areas are not as pronounced as those in house prices, whatever the interest rate, the percentage of householders who can afford an average-priced house in high-priced areas is significantly smaller than in lower-cost areas. But in high-priced areas the effects of increase in mortgage interest rates are more severe than in low-cost areas, so the total effect of high interest rates and high prices reduces the size of the potential client group to a small number.

Factors in speculation about the long-term housing market are a 7% decrease in the proportion of children under 15 in the population of Canada and a 17.9% increase in the age group over 65 years between 1976 and 1981. These results from the 1981 Census indicate that a different mix of dwelling units might be required in the early years of the 21st century.

### 7.2.3 Condominiums

Data were compiled for the first time in the 1981 Census on the distribution of dwellings forming part of a registered condominium. This recent phenomenon is particularly widespread in Ontario, British Columbia and Alberta where almost one out of 20 homeowners have condominium tenure.

The total number of condominium loans under the National Housing Act (NHA) increased slightly, by 2% in 1982. The most active areas were Toronto and Vancouver. Prices averaged \$50,861 for metro areas and \$35,879 in smaller centres. Vancouver, Calgary and Victoria commanded the lead in sale price levels. There was a continuation in the trend to higher ages of condominium buyers than of owners of single detached homes: 34.7 years as opposed to 31.9 years. This suggests older people selling single-family homes to move into condominiums and young families buying their first homes. This conclusion is supported by the fact that 55.1% of purchasers of existing NHA condominiums were previous owners in 1981. Borrower incomes in

metro areas averaging \$37,021 during 1982 were slightly higher than for smaller centres.

### 7.2.4 Mortgage lending

Total mortgages from lenders approved under the NHA increased to \$12.2 billion in 1982 from \$10.6 billion in 1981. However, the 1982 figure is not as high as that for 1980 when mortgage commitments totalled \$14.5 billion.

Residential mortgage lending, for new and existing dwellings combined, increased to \$10.7 billion for 259,000 units in 1982 from \$9.2 billion for 208,000 units in 1981. Banks became the biggest single group of lenders when they expanded their total volume of residential mortgage lending to \$3.9 billion for 85,000 units from \$3.1 billion for 60,000 units. They displaced trust companies which became the second largest group of lenders by providing \$3.1 billion. Loan and other companies were still third, providing \$2.5 billion and life insurance companies provided the remaining \$1.2 billion.

The increase was due to the sharp expansion in lending for existing dwellings which increased to \$7.5 billion for 198,000 units in 1982 from \$4.8 billion for 129,000 units in 1981. Lending for new residential construction declined to \$3.2 billion for 61,000 units from \$4.4 billion for 78,600 units.

The overall volume of mortgage lending was constrained during 1982, as in 1981, by weak demand for mortgage funds as the mortgage market responded to the relatively tight monetary policy in effect up to July 1982. This policy, aimed at curbing inflationary pressures and at maintaining the value of the Canadian dollar in relation to the American dollar, led to increases in the bank rate to a record level of 22.75% in August 1981, followed by sharp declines to 14.59% in January 1982 and increases again to 16.58% in June 1982. The Bank of Canada then eased its monetary policy, paving the way for a decline in the bank rate to 10.26% by December 1982. Mortgage rates mirrored these changes. The five-year conventional mortgage rate had peaked at 21.46% in September 1981, and increased from 18.05% in January 1982 to 19.42% in July, then declined to 14.13% by December 1982. Because of this easing in monetary policy, the demand for mortgage funds increased strongly in the second half of the year to end on a sharp upward trend.

## 7.3 Canada Mortgage and Housing Corp.

Canada Mortgage and Housing Corp. (CMHC) is the federal government's housing agency, charged with the administration of the NHA. It is a Crown corporation with a board of directors reporting to a minister responsible to Parliament. CMHC is one of the largest financial institutions in Canada but at the same time has extensive department-like responsibilities in administration of grants, contributions and

subsidies, and in providing policy advice to government on housing and related matters.

In its role as a financial institution, CMHC is primarily a mortgage insurer. It continues, however, to make direct mortgage loans, as a residual lender, with funds borrowed from government. In 1982 the corporation also administered a \$10.4 billion portfolio of loans and investments, as well as some 4,500 dwelling units owned by CMHC and 11,000 dwelling units owned by the CMHC mortgage insurance fund.

In its departmental role, CMHC is responsible for grants, contributions and subsidies. These amounted to under \$1.4 billion in 1982, up from just over \$1 billion in 1981 directed to: social housing; rehabilitation and conservation of existing housing; community improvement; research, development and demonstration projects; and providing housing information.

### 7.3.1 Housing legislation and policy

**National Housing Act.** Amendments to the NHA introduced in March 1982 included a wide range of changes, the most significant concerning mortgage loan insurance.

The amendments also allowed CMHC to provide assistance to homeowners facing renewal of their mortgages at high interest rates.

**Housing loan regulations.** Amendments during 1982 were also made to the regulations of NHA loans. The amount of a loan which could be forgiven under a residential rehabilitation assistance program (RRAP) was increased in November 1982 to \$5,000 for homeowners and \$3,500 for landlords. The income limit for homeowners was increased to \$13,000 for full forgiveness, decreasing by \$1 for each additional \$2 of income to \$23,000.

In December 1982 the regulations were amended to set premiums for other than first mortgage loans.

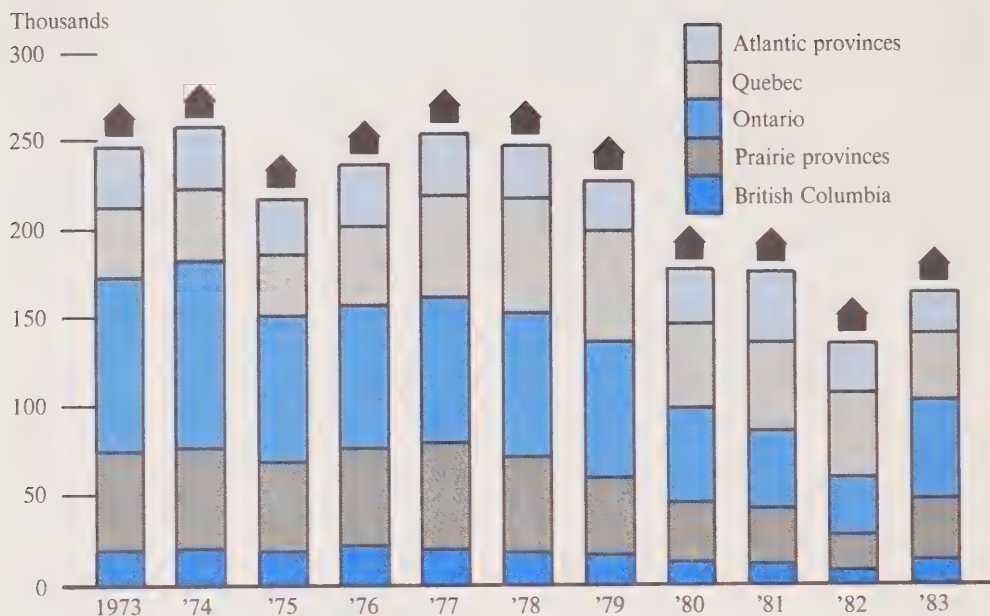
### 7.3.2 Market housing support

**Mortgage renewal.** A Canada mortgage renewal plan (CMRP) announced in November 1981 was designed to help homeowners who were facing financial difficulties on the renewal of their mortgages. Assistance of up to \$3,000 a year was available for households renewing mortgages between Sept. 1, 1981 and Nov. 12, 1982. There was a special guarantee for the deferral of interest payment when there was equity in the home. Where there was little or no equity, a non-taxable grant was provided.

In June 1982 four modifications were announced. First, the plan was changed from a deferred interest and grant formula to simply a non-taxable grant. Second, after June 28, 1982 homeowners who were receiving interest deferral assistance under the original plan were given grant assistance instead. Third, the plan was extended from Nov. 12, 1982 to Dec. 31, 1983. Fourth, applicants who qualified under the original or revised plan could re-apply at the end of their first eligibility period.

By the end of 1982, a total of 9,757 applications had been approved for commitments of \$16.3 million.

Chart 7.1

**Dwelling units completed**

**Home-ownership stimulation.** A Canadian home-ownership stimulation plan (CHOSP) was implemented in June 1982. Contributions of \$3,000 were available to purchasers of newly constructed units started before January 1983, and to first-time buyers of existing units purchased before January 1983.

CHOSP helped to finance 48,000 new homes during 1982 and facilitated the sale of 88,600 existing homes for a total commitment of \$410 million. The plan was extended with \$100 million more to April 1983 for purchases made before January 1984 of new housing units started during the first four months of 1983. This program's objective was to stimulate house-building, create employment and make it easier for more Canadians to own their own homes.

**Rental supply.** A Canada rental supply plan (CRSP), introduced in November 1981, continued in 1982 and 1983. The program provided interest free loans to rental projects for a term of 15 years. These loans are subsequently repayable at prevailing market interest rates. CRSP helped to finance 10,744 rental units during 1982. The aim was to assist in building as many as 30,000 rental units over a two-year period, to prevent further decreases in vacancy rates.

### 7.3.3 Social housing

CMHC has helped low-income Canadians to obtain housing at below-market rents since 1949. In recent

years the corporation has been adding over 30,000 units annually to the social and public housing stock, increasing it to about 260,000 units. Commitments were made in 1982 to add 28,453 social housing units. About 10.6% of these were financed by direct mortgage loans through CMHC and the remainder by private lenders under NHA mortgage loan provisions.

**Rural and native housing.** Canadians living in rural or remote parts of the country, whose housing is inadequate, are served by a rural and native housing program started in 1974 with a goal of providing or repairing 50,000 dwelling units. This goal was reached in 1980 but the program has been continued with 18,166 units of new, acquired or rehabilitated housing started in 1981 and 19,051 units during 1982.

**Northern housing.** In settlements in Northern Canada, capital funding for 352 public housing units and subsidies for 93 units in 1982 augmented the 1981 total of 3,585 social housing units in the North. Most of the activity consisted of small projects of four to 15 units, but one co-operative project in Yellowknife, NWT had 50 units. A continuing project in Northern Quebec involved renovation over a period of years with NHA assistance of 800 units transferred to the provincial housing corporation from the federal Indian affairs and northern development department.

### 7.3.4 Rehabilitation and conservation

**Residential rehabilitation.** The federal government encourages the preservation of the existing housing stock and extension of its useful life. A residential rehabilitation assistance program (RRAP) is part of a strategy to balance the preservation of housing with new construction to meet housing needs. In the three-year period 1980-82 CMHC loans and grants helped in the repair and improvement of more than 117,000 dwellings and hostel bed units. More than half the 1982 commitments of \$149.9 million went to recipients of the rural and native housing program. To meet objectives of the International Year of Disabled Persons in 1981, disabled persons could apply for help to modify their houses to make them barrier free.

**Home renovation.** A Canadian home renovation plan (CHRP) was introduced in April 1982 primarily as a job creation program, to provide help to homeowners for a wide range of improvements and repairs. Eligible homeowners could receive forgivable loans of up to 30%, to a maximum of \$3,000, toward the cost of repairing or improving their homes. The loan forgiveness had to be earned in one year and this benefit was tax free. A minimum of one-third of the cost had to be spent on contracted labour. By the end of 1982, nearly 38,600 applications had been approved for \$64.6 million in forgivable loans.

**Energy conservation.** CMHC is an agent for the energy, mines and resources department (EMR) in delivering grants in a Canadian home insulation program (CHIP) to help homeowners improve the insulation in their dwellings. CMHC also administered, until September 1982, part of a Canada oil substitution program (COSP) for EMR, providing grants to homeowners and businesses to help meet the cost of converting their heating systems from oil to other energy sources.

### 7.3.5 Community services

CMHC continued to supply funds for a number of community services programs that were being phased out. Payments under a municipal incentive grants program ended in March 1982. During its lifespan this program had provided grants of \$139.6 million to municipalities to encourage construction of modestly-priced medium density housing and 139,600 units were built. Under an urban renewal program, 28 projects were still to be completed, of a total of 108. Federal funds provided for community sewer and water projects, reimbursing municipalities for capital expenditures in projects undertaken between January 1979 and the end of February 1984. Other funds went to neighbourhood improvement projects started by municipalities between January 1974 and March 1978 to improve the physical environment of older residential neighbourhoods and develop social and recreational amenities.

## 7.4 Census and survey data on housing

The 1981 Census, like previous decennial censuses since 1941, provided a comprehensive inventory of the nation's dwelling stock in a complete housing census taken in conjunction with the censuses of population and agriculture. Summary data from the 1981, 1976 and 1971 censuses included here relate to a selection of the housing characteristics for which data were collected. More detailed information, including cross-classifications of the data, may be obtained from the advisory services division, regional operations branch, Statistics Canada. Much of the recent data was derived from the annual survey of household facilities and equipment carried out by Statistics Canada.

### 7.4.1 Dwellings and housing growth rates

The 1981 Census recorded a total of 8.28 million private occupied dwellings in Canada, up from 7.17 million in 1976. There were 6.03 million in 1971. (A dwelling, for census purposes, is a set of living quarters in which a person or group of persons resides or could reside.) The rate of increase in the number of households was almost three times as great as population growth because of the growing number of elderly people, the increased incidence of divorce and the larger numbers of young people living alone after leaving their parental home. This increase in the number of households indicated that the demand in future would be for smaller homes.

A decrease in the number of children and the increase in the number of elderly people were factors helping to reduce the average number of persons in each household to 2.9 in 1981 from 3.5 in 1971.

### 7.4.2 Dwelling types, tenure and size

**Dwelling types.** The largest proportion (57.2%) of private dwellings in 1981 was single detached, which increased in number to about 4.7 million from about 4 million in 1976. Multiple dwellings increased to 3.3 million from 3.0 million in 1976. Multiple dwellings include apartments (in categories of less than five storeys and five or more storeys), double or semi-detached row houses, dwellings attached to non-residential structures and duplexes. The number and percentage of movable dwellings rose to 215,435 (2.6%) from 174,710 (2.4%).

**Tenure.** Census figures for 1981 show that home ownership continued to increase steadily from 3.6 million in 1971 to 5.1 million in 1981. The proportion of dwellings owner-occupied was 62.1% in 1981, up from 61.8% in 1976 and 60.3% in 1971. In spite of this, most provinces showed a decrease in the percentage of owned dwellings. The biggest declines were in Saskatchewan (to 72.9% in 1981 from 75.5% in 1976) and Northwest Territories (to 22.6% from 25.0%). New Brunswick increased to 73.4% from 71.8% and Quebec to 53.3% from 50.4%, while Ontario decreased slightly from 63.6% to 63.3%. Newfoundland remained unchanged at 80.6%.

The number of dwellings rented in 1981 was about 3.1 million, up from 2.4 million in 1971. Ontario had the most rented dwellings, about 1.1 million, with Quebec a close second with about 1 million. Yukon had the least with 3,590.

**Dwelling size.** The average number of rooms per dwelling increased to 5.7 in 1981 from 5.4 in 1971. Newfoundland and Prince Edward Island each had the largest average number, 6.2 rooms. Newfoundland had increased from 5.8 and Prince Edward Island from 6.1. The average number of rooms in dwellings in Yukon, Northwest Territories, Quebec and Manitoba remained lower than in the rest of the country.

**Shelter costs.** Just over one-half of non-farm homeowners reported in 1981 that monthly housing costs, including energy, municipal services, mortgage and taxes amounted to \$300 or less. One-quarter reported their major payments to be more than \$500 each month. The national average payment was \$367 a month.

Alberta reported the highest average payment (\$463), followed by Yukon (\$457), Northwest Territories (\$407) and British Columbia (\$400). These provinces and territories also had a higher proportion of households with monthly payments of \$700 and more. In the other provinces, the proportion of households with major payments of less than \$300 a month ranged from 48.1% in Quebec to 73.5% in Newfoundland. Average major payments ranged from \$236 in Newfoundland to \$380 in Ontario.

More than one out of five (22.2%) one-family households without additional persons who owned their dwellings were paying 25% or more of their income in 1981 on the major shelter expenditures of mortgage payments, property taxes, electricity, fuel and municipal services.

Almost two-thirds of rented non-farm accommodation cost less than \$300 a month in 1981. In just 7% of tenant-occupied non-farm dwellings, the average monthly gross rental payments were \$500 or more.

One-third of one-family households living in rented dwellings were paying 25% or more of their income on gross rent; this includes cash rent, electricity, fuel and municipal services. More than one in 10 (11.7%) families expended 50% or more of their income on shelter.

Among the provinces, the proportion of tenant one-family households paying 25% or more of their income on gross rent was highest in Alberta (42.4%), British Columbia (41.2%) and Prince Edward Island (41.8%). Quebec had the lowest proportion (28.1%) of one-family households paying one-quarter or more of their income on gross rent.

Alberta had the highest average gross rent (\$384), followed by British Columbia (\$340) and Yukon (\$309). The national average was \$296 a month.

### 7.4.3 Period of construction

At the time of the 1981 Census, nearly 2.7 million of the 8.28 million private dwellings had been built since 1970. Almost half (45.8%) were constructed before 1961. In Alberta, 46.7% of the dwellings had been constructed since 1971. British Columbia had 39.6% of its dwellings constructed after 1971, Yukon 51.5% and Northwest Territories 52.8%. The proportion for the other eight provinces collectively was 29.6%.

**Condition of dwelling.** The June 1981 Census indicated that more than three-quarters (76.3%) of total dwellings simply required regular maintenance, while 17% needed minor repairs and 6.7%, major repairs. The distribution of dwellings according to their need of repairs was fairly consistent from province to province.

Nova Scotia at 10.1% and New Brunswick at 10.0% had the largest percentages of dwellings requiring major repairs. Ontario at 5.7%, Alberta at 6.0% and British Columbia at 5.5% had the lowest.

**Length of occupancy.** Between 1971 and 1981 the proportion of households continuously occupying the same dwelling for more than 10 years fell from 33.2% to 28.4%. The number of households in this category increased, however, to almost 2.4 million in 1981 from about 2 million in 1971.

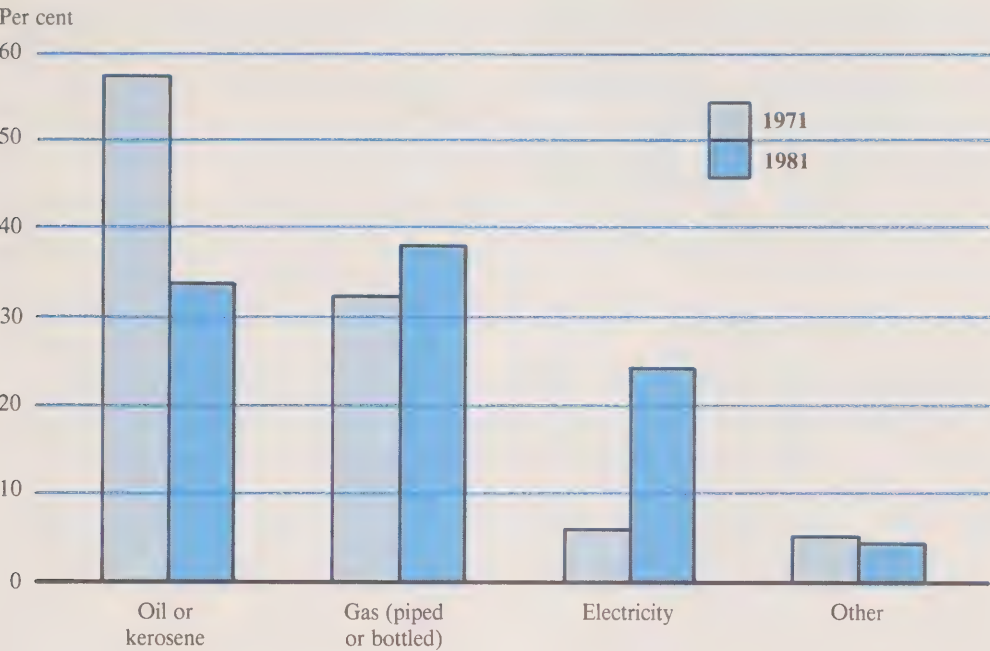
The decrease in proportion was true of all provinces and Yukon. By the end of the 1971-81 period, households were showing a greater tendency to occupy a dwelling for one to five years (38.0% in 1981 up from 32.4% in 1971).

### 7.4.4 Heating fuel

Because of energy-related issues, data on home heating fuels have been receiving increased attention. Census data for 1981 showed that the number of dwellings using piped or bottled gas in 1981 was about 3 million, up from almost 2 million in 1971. Those using oil decreased to about 2.8 million from about 3.4 million. Dwellings which were electrically heated showed a large increase to about 2 million from almost 353,000, up 468.5% nationally in 10 years. Other fuels were used in about 342,000 private dwellings, up from about 301,000.

**Heating equipment.** In 1981 the number of dwellings with installed electric heat was five times greater than in 1971. Forced hot air furnaces nevertheless remained the country's most popular system, as they were used in almost half (49.1%) of all dwellings. Installed electric heating systems were used in 21.4% of dwellings. The growth in installed electric heating systems in Quebec accounted for 52.8% of the national increase. The use of heating stoves or space heaters declined as a main type of heating equipment, to 6.7% in 1981 from 17.3% in 1971 with this increased use of electricity.

Chart 7.2  
Home heating fuels



7.4.5 Household facilities and equipment

**Survey data.** An annual Statistics Canada survey of household facilities and equipment provides an inventory to measure advances in living standards and to provide data for market research. The 1982 survey covered items such as plumbing and sanitary facilities, heating equipment, and accessories such as refrigerators, freezers, dishwashers, clothes dryers and television sets. The survey included about 35,000 households, chosen by area sampling methods, representing virtually all private households in Canada. Unlike decennial censuses, the sample survey cannot produce data for smaller localities and areas, but much of the information is available for individual provinces and selected metropolitan areas.

Out of about 8.3 million households, it was estimated that almost 8.2 million had baths or showers and flush toilets. There were 6.9 million homes with one bathroom and 1.3 million with two or more. Only 103,000 households had no installed baths or showers.

The survey showed that gas continued to replace oil as the principal heating fuel in 1982. There were almost 3.6 million households using gas and 2.5 million using oil or other liquid fuel. Electricity was third most popular, being used in 1.8 million households. Wood was in use in 351,000 households,

bottled gas in 53,000 and coal or coke in 14,000. Wood was used in 4.3% of households in 1982 but only 1.8% in 1979.

Another finding of the 1982 survey was that while virtually all households contain a radio, television set and telephone, the proportion of homes having several units continued to grow. For example, 3.2 million households owned two or more television sets, an increase of 4.2% since 1979.

7.5 Construction

7.5.1 Value of construction work

Data on the construction industry represent the estimated total value of all new and repair construction purchased by contractors and by the labour forces of utility, manufacturing, mining and logging firms, government departments, homeowner builders and other persons or firms not primarily engaged in the construction industry.

All estimates given for cost of materials used are based on ratios of this item to total value of work performed, derived from annual surveys of construction work performed by contractors and others and applied to the total value-of-work figures. Estimates of labour content are similarly based but are also adjusted to include working owners and partners and their withdrawals.

### 7.5.2 Building permits issued

The estimated value of proposed construction is indicated by the value of building permits issued. Figures of building permits are collected by Statistics Canada from approximately 2,000 municipalities across the country and are available for individual municipalities, metropolitan areas, provinces, economic areas and census divisions.

The total value of permits issued for building construction in 1982 was about \$12.8 billion, down from about \$18.7 billion in 1981 and almost \$15.5 billion in 1980. Residential construction value was around \$6.1 billion in 1982, down from \$9.8 billion in 1981 and \$7.5 billion in 1980.

### 7.6 Capital expenditures

Total capital expenditures during 1983 in the Canadian economy were expected to reach about \$73.8 billion, a decrease of 1.7% from the 1982 level of about \$75.1 billion. These estimates were in current dollars without any adjustment for price increase and reflected the intended outlays by respondents in a Statistics Canada capital and repair expenditures survey carried out between May and June 1983. The survey covered about 25,000 business establishments, educational and other institutions and governments at all levels.

Intended capital outlays for new construction during 1983 were expected to reach \$46.6 billion, 0.9% above the 1982 amount of \$46.2 billion. Estimates included \$12.0 billion for residential construction (\$9.9 billion in 1982) and \$34.7 billion (\$36.3 billion in 1982) for non-residential construction. The 1983 total for machinery and equipment was estimated at \$27.2 billion, 5.9% below the \$28.9 billion in 1982.

Capital expenditures in one region may have income-giving effects in others. For example, spending millions of dollars on plant and equipment in Western Canada may generate considerable activity in machinery industries in Ontario and Quebec as well as construction activity in the western provinces.

### 7.7 Price indexes

Statistics Canada compiles price indexes relating to outputs of industries specializing in construction work, selected categories of capital expenditure and other related indexes. These data are available in summary in a monthly publication, *Construction price statistics*, and in detail from the Canadian socio-economic information management system (CANSIM), a Statistics Canada computer data bank.

**New housing price indexes** measure changes in selling prices of new houses constructed by large and medium-volume builders in metropolitan areas. Prices used are the selling prices agreed upon

between builder and buyer at the time a contract is signed. The composite index includes the house and the serviced lot on which it stands (except for a few areas, principally in Quebec, where the servicing costs are paid, not to the builder as part of the purchase price, but to the local municipality in property taxes). They exclude legal fees, provincial land transfer taxes and similar costs to the buyer in acquiring the property. Price movements cover single unit houses, semi-detached and row condominiums (Table 7.3).

**Construction wage rate indexes** measure wage rates for 16 main trades in 22 metropolitan areas. The index includes the basic rate for hourly wages and supplements. The supplements include such elements as vacation pay, statutory holiday pay, pension contribution, employer contribution to private plans, health and welfare, industry promotion and training fund. Weights are based on estimates of gross earnings of each trade in each metropolitan area, derived from census data (Table 7.12).

**Building construction input price indexes.** The wage rate series is combined with selected materials price indexes to yield input price indexes for construction. Residential building construction input price indexes measure changes for labour and materials used in building single detached residences. They do not adjust for productivity changes involved in design or in putting the work in place. Neither do they cover such elements as site preparation, overhead and profit. Similarly, non-residential building construction price indexes measure price changes for labour and material. They do not allow for freight charges or local taxes (Table 7.11).

**Output price indexes of non-residential construction** measure the change in estimated contract amounts for the construction of selected non-residential buildings as shown for Montréal, Ottawa, Toronto and Vancouver in Table 7.13. Office buildings, schools and light industrial buildings were selected to be representative of types of commercial, institutional and industrial construction. Included as measures of output were prices for materials, labour, use of equipment, sales taxes, job overhead and profit. They reflect conditions of the local market and also the results of productivity in putting the work in place (Table 7.13).

**Highway construction price indexes.** These base-weighted indexes relate to prices paid by provincial governments in contracts awarded for highway construction. The indexes measure the effect of price change on the cost of specified new highway construction projects represented by contracts of approximately \$50,000 or more awarded by provincial governments. Prices contained in the index are for units of construction work put in place by contractors. Also included are prices of materials usually supplied by the highways department such as culverts and asphalt (Table 7.14).

**Machinery and equipment price indexes.** Based on the input/output structure of industries and commodities these indexes indicate variations in estimated purchase prices of machinery and equipment bought by Canadian industries of both domestically produced and imported goods. Table 7.26 shows indexes by industry of purchase. Also

available on CANSIM are sub-indexes by origin and by selected commodity. Other types of capital expenditure price data available from Statistics Canada are measures applying to total capitalized cost for certain categories of investment for electric utilities, process industries, chemical and petrochemical industries and telecommunications.

#### Sources

- 7.1 - 7.3 Editorial Services, Canada Mortgage and Housing Corp.
- 7.4 - 7.4.4 Housing, Family and Social Statistics Division, Statistics Canada.
- 7.4.5 Consumer Income and Expenditure Division, Statistics Canada.
- 7.5 - 7.7 Construction Division and Prices Division, Statistics Canada.

#### Selected references

- Building permits*, 1982. Statistics Canada 64-203, Ottawa, 1983.
- Canada Mortgage and Housing Corporation, annual report*. Ottawa, 1982.
- Canadian housing statistics*. Statistical services division, Canada Mortgage and Housing Corp., 1982.
- 1981 Census of Canada, *Occupied private dwellings*. Statistics Canada 92-932, Ottawa, 1984.
- Construction in Canada*, 1983. Statistics Canada 64-201, Ottawa, 1983.
- Construction price statistics*, December 1983. Statistics Canada (monthly) 62-007, Ottawa, 1984.
- Household equipment and facilities*, May 1983. Statistics Canada 64-202, Ottawa, 1983.
- Private and public investment in Canada: outlook*, 1983. Statistics Canada 61-205, Ottawa, 1983.

# TABLES

.. not available  
 . . not appropriate or not applicable  
 — nil or zero  
 - - too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

## 7.1 Dwelling units<sup>1</sup> started and completed, by type of financing and by region

Dwelling units started and completed, by type of financing and by region						Dwelling units completed
Year and region	Dwelling units started				Total	
	National Housing Act		Conventional institutional loans	All other financing		
	CMHC	Approved lenders loans				
1978	14,760	72,254	73,600	67,053	227,667	246,533
1979	10,023	38,680	83,000	65,346	197,049	226,489
1980	3,720	28,921	53,350	72,610	158,601	176,168
1981	2,148	26,389	40,724	105,736	177,973	174,966
1982	1,577	30,577	24,826	66,573	125,860	133,942
1978						
Atlantic provinces	1,710	2,816	5,184	4,385	14,095	16,238
Quebec	3,499	12,824	10,600	16,748	43,671	54,129
Ontario	5,374	30,480	27,058	8,798	71,710	80,429
Prairie provinces	3,126	18,380	23,935	24,132	69,573	64,958
British Columbia	1,051	7,754	6,823	12,990	28,618	30,779
1979						
Atlantic provinces	1,293	1,564	5,399	5,370	13,626	15,006
Quebec	4,247	6,825	11,493	19,165	41,730	44,288
Ontario	2,124	15,485	29,135	10,143	56,887	76,570
Prairie provinces	2,243	9,312	25,164	20,742	57,461	63,767
British Columbia	116	5,494	11,809	9,926	27,345	26,858
1980						
Atlantic provinces	893	1,397	2,811	5,763	10,864	11,448
Quebec	980	7,961	6,900	13,345	29,186	33,560
Ontario	544	11,368	16,945	11,270	40,127	54,021
Prairie provinces	1,220	4,368	15,094	20,196	40,878	46,983
British Columbia	83	3,827	11,600	22,036	37,546	30,156
1981						
Atlantic provinces	931	621	1,596	6,081	9,316	11,107
Quebec	3	7,174	5,199	17,043	29,645	30,691
Ontario	182	11,123	17,078	21,274	50,161	45,557
Prairie provinces	945	4,329	10,527	29,835	47,266	47,355
British Columbia	87	3,142	6,324	31,503	41,585	40,286
1982						
Atlantic provinces	812	1,032	1,090	5,407	8,412	7,030
Quebec	6	8,592	1,880	12,922	23,492	21,526
Ontario	113	13,293	11,525	13,012	38,508	40,437
Prairie provinces	533	4,308	6,378	23,147	35,641	38,663
British Columbia	113	3,352	3,953	12,087	19,807	26,286

<sup>1</sup>Excludes Yukon and Northwest Territories.

## 7.2 Dwelling units started in metropolitan areas, large urban centres and urban agglomerations

Area	Dwelling units started							
	1979	1980	1981	1982	Single detached	Semi-detached and duplex	Row	Apartment, other
	Total	Total	Total	Total				
METROPOLITAN AREAS								
Calgary	12,383	11,104	15,172	9,599	3,140	470	1,955	4,034
Chicoutimi-Jonquière	1,464	680	582	419	206	40	—	173
Edmonton	12,298	9,967	11,999	9,738	2,204	152	1,350	6,032
Halifax	1,705	1,196	1,218	1,570	766	234	40	1,530
Hamilton	1,885	1,698	1,907	1,584	918	6	400	260
Kitchener	2,129	1,025	2,111	1,507	438	193	172	704
London	2,828	1,430	1,770	824	211	6	225	382
Montréal	16,188	12,433	14,643	11,497	3,991	1,380	444	5,682
Oshawa	1,119	769	1,331	680	287	224	80	89
Ottawa-Hull	4,777	2,590	4,035	5,404	2,316	234	1,046	1,808
Québec	5,186	3,545	3,746	3,071	1,227	236	207	1,401
Regina	2,537	1,256	1,431	1,952	617	60	161	1,114
Saint John	376	233	258	191	191	—	—	—
St. Catharines-Niagara	1,165	671	705	1,007	262	112	113	520
St. John's	851	1,566	1,355	767	297	184	144	142
Saskatoon	4,259	1,880	2,076	3,481	707	156	—	2,618
Sudbury	659	328	300	223	66	2	—	155
Thunder Bay	677	313	434	217	101	6	—	110
Toronto	21,379	20,204	26,133	19,064	8,762	798	1,531	7,973
Trois-Rivières	1,868	618	543	521	175	2	—	344
Vancouver	12,827	16,780	15,277	10,116	2,482	231	2,232	5,171
Victoria	1,737	2,689	3,030	1,394	474	46	304	570
Windsor	2,714	1,255	618	47	47	—	—	—
Winnipeg	4,091	1,668	2,088	1,444	731	58	—	655
LARGE URBAN CENTRES AND URBAN AGGLOMERATIONS								
Brantford	463	218	268	79	71	8	—	—
Barrie	...	...	...	631	242	40	206	143
Cornwall	...	...	...	53	43	6	—	4
Drummondville	...	...	...	75	30	4	—	41
Fredericton	...	...	...	179	145	—	—	34
Guelph	465	438	554	235	206	18	—	11
Kamloops	523	852	898	400	64	26	67	243
Kelowna	1,080	1,189	1,017	469	241	16	129	83
Kingston	724	380	592	510	239	18	—	253
Lethbridge	...	...	...	527	238	46	22	221
Moncton	682	312	104	204	93	—	25	86
Nanaimo	...	...	...	554	174	8	—	372
North Bay	243	183	159	248	35	24	—	189
Peterborough	317	155	145	160	92	—	8	60
Prince George	544	787	971	466	72	28	49	317
Sarnia	290	190	319	171	137	—	34	—
Sault Ste Marie	750	918	936	324	100	4	28	192
Shawinigan	590	253	124	96	68	8	—	20
Sherbrooke	1,459	786	618	359	192	4	—	163
St-Jean	491	350	260	368	95	30	—	243
Sydney/Sydney Mines	731	505	491	483	271	—	—	212
Other areas	25,263	21,599	35,532	21,068	15,344	394	547	4,783
Canada <sup>1</sup>	151,717	125,013	177,973	125,860	54,457	6,254	11,987	53,162

<sup>1</sup>Excludes the Yukon and Northwest Territories.

### 7.3 New housing price indexes, for metropolitan areas (1976 = 100)

Metropolitan area	1976	1977	1978	1979	1980	1981	1982
St. John's (Nfld.)	100.0	101.3	101.7	106.0	124.1	131.5	130.2
Halifax	100.0	102.3	102.2	104.5	112.9	112.9	112.9
Québec	100.0	111.4	119.8	129.6	139.8	149.5	158.3
Montréal	100.0	105.4	107.4	113.7	126.1	143.3	154.0
Ottawa-Hull	100.0	102.9	101.3	101.8	107.6	120.0	130.1
Toronto	100.0	99.7	99.8	99.2	104.1	121.9	123.0
Hamilton	100.0	102.8	103.9	104.2	107.1	116.9	125.3
St. Catharines-Niagara	100.0	108.5	113.7	116.7	119.0	123.6	124.9
Kitchener	100.0	100.8	102.6	102.6	105.0	112.7	117.3
London	100.0	105.2	109.5	117.2	122.7	131.3	134.0
Windsor	100.0	106.6	115.3	136.1	141.1	138.7	132.1
Thunder Bay	100.0	109.6	115.7	122.0	127.0	130.1	132.0
Winnipeg	100.0	106.0	109.7	111.9	112.9	121.7	133.0
Regina	100.0	99.7	99.1	101.9	104.1	114.1	119.2
Saskatoon	100.0	107.4	113.2	122.0	130.0	140.1	139.9
Calgary	100.0	106.9	115.5	123.2	132.4	145.9	147.3
Edmonton	100.0	106.9	114.3	123.0	132.7	140.0	137.0
Vancouver	100.0	98.7	98.0	100.3	124.2	156.5	123.5
Victoria	100.0	97.2	95.5	95.6	107.1	129.6	112.9
Canada	100.0	103.3	106.0	109.9	118.6	132.9	132.7

### 7.4 Occupied private dwellings by type, tenure and province

		1971	1976	1981	Percentage change 1976-81
Total occupied private dwellings	No. %	6,034,510 100.0	7,166,095 100.0	8,281,530 100.0	15.6
TYPE OF DWELLING					
Single detached	No. %	3,591,770 59.5	3,991,540 55.7	4,735,395 57.2	18.6
Multiple dwellings <sup>1</sup>	No. %	2,378,635 39.4	2,999,850 41.9	3,330,700 40.2	11.0
Movable	No. %	64,105 1.1	174,710 2.4	215,435 2.6	23.3
TENURE					
Owned	No. %	3,636,925 60.3	4,431,235 61.8	5,141,940 62.1	16.0
Rented	No. %	2,397,580 39.7	2,734,860 38.2	3,139,595 37.9	14.8
Newfoundland	No. %	110,440 1.8	131,665 1.8	148,420 1.8	12.7
Prince Edward Island	No. %	27,880 0.5	32,930 0.5	37,660 0.5	14.4
Nova Scotia	No. %	207,505 3.4	243,100 3.4	273,195 3.3	12.4
New Brunswick	No. %	157,635 2.6	190,435 2.7	214,920 2.6	12.9
Quebec	No. %	1,604,785 26.6	1,894,110 26.4	2,172,860 26.2	14.7
Ontario	No. %	2,225,490 36.9	2,634,620 36.8	2,969,785 35.9	12.7
Manitoba	No. %	288,370 4.8	328,005 4.6	357,985 4.3	9.1
Saskatchewan	No. %	267,565 4.4	291,155 4.1	332,710 4.0	14.3

7.4 Occupied private dwellings by type, tenure and province (concluded)

		1971	1976	1981	Percentage change 1976-81
Alberta	No. %	464,615 7.7	575,280 8.0	758,245 9.2	31.8
British Columbia	No. %	667,545 11.1	828,290 11.6	996,640 12.0	20.3
Yukon	No. %	2	6,495 0.1	7,600 0.1	17.0
Northwest Territories	No. %	12,675 0.2	10,020 0.1	11,520 0.1	15.0

<sup>1</sup>Multiple dwellings include, apartments (less than five storeys and five or more storeys), double houses or semi-detached, row houses, dwellings attached to non-residential structures, duplexes.  
<sup>2</sup>Yukon is combined with Northwest Territories.

7.5 Type of dwelling by province and by census metropolitan area, 1981

Province and census metropolitan area	Total occupied private dwellings <sup>1</sup>	Single detached	Multiple- unit types <sup>2</sup>	Single detached %	Multiple- unit types <sup>2</sup> %
PROVINCE					
Newfoundland	148,420	116,495	27,060	78.5	18.2
Prince Edward Island	37,660	28,105	7,600	74.6	20.2
Nova Scotia	273,195	186,235	71,925	68.2	26.3
New Brunswick	214,915	151,905	50,585	70.7	23.5
Quebec	2,172,855	954,460	1,181,245	43.9	54.4
Ontario	2,969,785	1,690,955	1,253,900	56.9	42.2
Manitoba	357,980	242,095	106,860	67.6	29.8
Saskatchewan	332,715	258,035	60,745	77.6	18.3
Alberta	758,240	473,340	244,450	62.4	32.2
British Columbia	996,640	622,370	320,705	62.4	32.2
Yukon	7,600	4,435	2,150	58.4	28.3
Northwest Territories	11,520	6,965	3,475	60.5	30.2
Canada	8,281,530	4,735,390	3,330,705	57.2	40.2
METROPOLITAN AREA					
Calgary, Alta.	210,835	115,460	92,845	54.8	44.0
Chicoutimi-Jonquière, Que.	40,305	22,810	16,750	56.6	41.6
Edmonton, Alta.	231,815	129,030	99,825	55.7	43.1
Halifax, NS	93,965	47,120	43,400	50.1	46.2
Hamilton, Ont.	190,245	111,325	78,665	58.5	41.3
Kitchener, Ont.	99,400	55,500	43,730	55.8	44.0
London, Ont.	105,595	57,680	47,480	54.6	45.0
Montréal, Que.	1,026,925	274,935	748,585	26.8	72.9
Oshawa, Ont.	50,905	29,725	21,095	58.4	41.4
Ottawa-Hull, Ont., Que.	256,390	107,005	147,765	41.7	57.6
Québec, Que.	195,465	84,080	108,865	43.0	55.7
Regina, Sask.	58,700	40,765	17,660	69.4	30.1
Saint John, NB	37,185	18,650	16,975	50.2	45.6
St. Catharines, Ont.	106,490	74,825	31,295	70.3	29.4
St. John's, Nfld.	43,305	27,400	15,180	63.3	30.1
Saskatoon, Sask.	57,335	37,870	19,010	66.0	33.2
Sudbury, Ont.	48,455	30,625	17,200	63.2	35.5
Thunder Bay, Ont.	41,895	30,110	11,385	71.9	27.2
Toronto, Ont.	1,040,340	418,810	620,925	40.3	59.7
Trois-Rivières, Que.	38,540	16,910	21,300	43.9	55.3
Vancouver, BC	476,760	273,705	197,040	57.4	41.3
Victoria, BC	94,970	53,420	40,025	56.2	42.1
Windsor, Ont.	86,080	58,150	26,885	67.6	31.2
Winnipeg, Man.	217,205	128,500	87,895	59.2	40.5

<sup>1</sup>Includes mobile homes and other movable dwellings.  
<sup>2</sup>Includes double and row houses, apartments, duplexes and dwellings attached to non-residential structures.

## 7.6 Occupied private dwellings, by tenure and location

Province or territory and type of locality	1971				1981			
	Owned	Rented	Percentage		Owned	Rented	Percentage	
			Owned	Rented			Owned	Rented
<b>PROVINCE</b>								
Newfoundland	88,335	22,110	80.0	20.0	119,695	28,725	80.6	19.4
Prince Edward Island	20,725	7,155	74.3	25.7	28,495	9,160	75.7	24.3
Nova Scotia	147,705	59,800	71.2	28.8	195,310	77,885	71.5	28.5
New Brunswick	109,450	48,185	69.4	30.6	157,680	57,240	73.4	26.6
Quebec	761,340	843,450	47.4	52.6	1,157,430	1,015,425	53.3	46.7
Ontario	1,400,340	825,145	62.9	37.1	1,878,950	1,090,835	63.3	36.7
Manitoba	190,585	97,790	66.1	33.9	235,590	122,395	65.8	34.2
Saskatchewan	194,535	73,035	72.7	27.3	242,510	90,200	72.9	27.1
Alberta	296,705	167,910	63.9	36.1	478,215	280,025	63.1	36.9
British Columbia	422,785	244,765	63.3	36.7	641,450	355,195	64.4	35.6
Yukon and Northwest Territories	4,425	8,240	35.0	65.0	6,615	12,505	34.6	65.4
<b>Canada</b>	<b>3,636,925</b>	<b>2,397,585</b>	<b>60.3</b>	<b>39.7</b>	<b>5,141,940</b>	<b>3,139,590</b>	<b>52.1</b>	<b>37.9</b>
<b>TYPE OF LOCALITY</b>								
Urban	2,572,885	2,164,535	54.3	45.7	3,650,415	2,855,680	56.1	43.9
500,000 and over	956,765	1,118,550	46.1	53.9	1,841,290	1,779,105	50.9	49.1
100,000-499,999	556,375	428,770	56.5	43.5	539,330	367,960	59.4	40.6
30,000- 99,999	304,450	230,365	56.9	43.1	421,465	276,705	60.4	39.6
5,000- 29,999	449,685	248,740	64.4	35.6	505,185	281,470	64.2	35.8
Under 5,000	305,610	138,105	68.9	31.1	343,160	150,445	69.5	30.5
Rural	1,064,045	233,050	82.0	18.0	1,491,520	283,905	84.0	16.0
Non-farm	758,830	210,830	78.3	21.7	1,234,165	270,450	82.0	18.0
Farm	305,210	22,215	93.2	6.8	257,350	13,460	95.0	5.0

## 7.7 Average number of rooms per occupied private dwelling, by province

Province	Average number of rooms per dwelling		
	1971 <sup>1</sup>	1976 <sup>2</sup>	1981 <sup>3</sup>
Newfoundland	5.8	5.7	6.2
Prince Edward Island	6.1	5.9	6.2
Nova Scotia	5.7	5.5	5.9
New Brunswick	5.7	5.7	6.0
Quebec	5.2	5.2	5.3
Ontario	5.6	5.6	5.9
Manitoba	5.2	5.1	5.5
Saskatchewan	5.3	5.5	5.8
Alberta	5.4	5.4	5.9
British Columbia	5.2	5.3	5.7
<b>Total</b>	<b>5.4<sup>4</sup></b>	<b>5.4</b>	<b>5.7<sup>4</sup></b>

<sup>1</sup>1971 Census, based on 100% enumeration.

<sup>2</sup>Household facilities and equipment survey, May 1976.

<sup>3</sup>1981 Census, based on 20% sample.

<sup>4</sup>Includes Yukon and Northwest Territories.

## 7.8 Period of construction and length of occupancy of occupied private dwellings, by location, 1981 (percentage distribution)

Province and census metropolitan area	Period of construction				Length of occupancy					
	Before 1946	1946-70	1971-81	Total	Less than 1 year	1-2 years	3-5 years	6-10 years	More than 10 years	Total
<b>PROVINCE</b>										
Newfoundland	20.9	45.4	33.8	100.0	11.6	12.3	17.0	17.0	42.2	100.0
Prince Edward Island	39.6	27.6	32.8	100.0	12.2	13.2	17.8	17.4	39.5	100.0
Nova Scotia	35.9	33.8	30.3	100.0	14.8	14.4	17.7	15.7	37.4	100.0
New Brunswick	31.4	34.3	34.3	100.0	13.8	14.1	19.2	16.9	36.0	100.0
Quebec	24.5	46.0	29.5	100.0	15.8	18.8	21.1	16.1	28.2	100.0
Ontario	25.9	45.2	28.9	100.0	16.4	17.2	20.2	16.3	29.9	100.0
Manitoba	25.6	44.8	29.5	100.0	17.3	15.3	19.7	16.3	31.3	100.0
Saskatchewan	24.7	43.4	31.9	100.0	17.6	15.0	19.2	15.4	32.7	100.0

7.8 Period of construction and length of occupancy of occupied private dwellings, by location, 1981 (percentage distribution) (concluded)

Province and census metropolitan area	Period of construction				Length of occupancy					
	Before 1946	1946-70	1971-81	Total	Less than 1 year	1-2 years	3-5 years	6-10 years	More than 10 years	Total
Alberta	11.6	41.6	46.7	100.0	26.1	21.0	19.2	12.8	20.9	100.0
British Columbia	16.1	44.4	39.6	100.0	22.2	20.1	20.6	15.8	21.4	100.0
Yukon and Northwest Territories	4.1	43.7	52.2	100.0	31.9	24.1	22.5	11.0	10.4	100.0
Canada	23.4	44.1	32.5	100.0	17.7	17.9	20.1	15.8	28.4	100.0
METROPOLITAN AREA										
Calgary, Alta.	8.3	43.8	48.0	100.0	29.8	22.9	18.0	11.7	17.6	100.0
Chicoutimi-Jonquière, Que.	19.7	42.6	37.8	100.0	14.8	16.0	20.3	18.0	30.9	100.0
Edmonton, Alta.	7.5	48.1	44.4	100.0	27.2	22.1	18.6	12.3	19.8	100.0
Halifax, NS	21.5	43.2	35.3	100.0	20.8	19.0	19.2	15.3	25.6	100.0
Hamilton, Ont.	24.6	49.0	26.4	100.0	15.2	16.3	19.9	16.3	32.3	100.0
Kitchener, Ont.	20.9	46.2	32.9	100.0	18.8	18.0	20.9	15.6	26.6	100.0
London, Ont.	23.2	45.5	31.3	100.0	20.8	18.6	19.7	14.1	26.8	100.0
Montréal, Que.	21.3	53.3	25.4	100.0	17.1	21.2	21.6	15.6	24.4	100.0
Ottawa-Hull, Ont., Que.	16.2	48.2	35.6	100.0	20.1	19.0	21.2	16.3	23.4	100.0
Québec, Que.	21.9	43.7	34.4	100.0	15.9	19.0	21.8	16.3	27.0	100.0
Regina, Sask.	16.1	48.9	35.0	100.0	22.9	17.7	20.3	14.9	25.1	100.0
Saint John, NB	32.4	35.5	32.1	100.0	17.3	16.7	20.4	15.9	29.7	100.0
St. Catharines-Niagara, Ont.	28.3	45.8	25.9	100.0	13.5	14.8	19.4	16.3	35.9	100.0
St. John's, Nfld.	20.0	41.7	38.3	100.0	15.1	15.8	18.7	17.2	33.2	100.0
Saskatoon, Sask.	15.7	47.9	36.4	100.0	26.7	19.8	17.4	12.3	23.8	100.0
Sudbury, Ont.	18.7	55.9	25.4	100.0	16.7	15.5	17.9	17.0	33.0	100.0
Thunder Bay, Ont.	29.4	42.9	27.8	100.0	15.0	15.6	19.6	14.3	35.6	100.0
Toronto, Ont.	19.9	51.1	28.9	100.0	17.3	19.2	20.7	16.4	26.4	100.0
Vancouver, BC	17.9	48.4	33.8	100.0	19.9	20.5	20.6	15.5	23.5	100.0
Victoria, BC	22.4	43.6	33.9	100.0	20.6	20.2	19.6	16.6	22.9	100.0
Windsor, Ont.	33.3	42.7	24.0	100.0	14.4	16.0	19.0	15.1	35.5	100.0
Winnipeg, Man.	25.0	46.3	28.7	100.0	19.6	16.1	19.5	15.9	28.9	100.0

7.9 Private occupied dwellings, percentage distribution of principal heating fuels

Province and year	Principal heating fuel				
	Oil or kerosene	Piped or bottled gas	Electricity	Other	Total
Newfoundland	1971	82.3	0.1	4.4	100.0
	1981	51.4	0.1	33.8	100.0
Prince Edward Island	1971	87.2	0.5	0.6	100.0
	1981	79.0	0.3	2.8	100.0
Nova Scotia	1971	83.6	0.8	2.5	100.0
	1981	75.2	1.1	11.2	100.0
New Brunswick	1971	84.5	0.8	2.4	100.0
	1981	59.9	0.4	24.3	100.0
Quebec	1971	79.3	8.0	7.9	100.0
	1981	46.4	6.9	43.7	100.0
Ontario	1971	54.0	37.1	6.1	100.0
	1981	31.7	47.6	17.7	100.0
Manitoba	1971	32.3	54.4	6.7	100.0
	1981	15.9	54.6	25.5	100.0
Saskatchewan	1971	32.7	60.4	0.8	100.0
	1981	19.2	70.4	7.1	100.0
Alberta	1971	9.4	83.6	1.3	100.0
	1981	3.0	88.9	6.5	100.0
British Columbia	1971	47.0	40.8	7.4	100.0
	1981	25.5	46.2	22.8	100.0
Yukon	1971	78.7	1.7	2.9	100.0
	1981	63.7	1.6	16.8	100.0
Northwest Territories	1971	80.1	5.1	0.7	100.0
	1981	81.9	4.1	5.7	100.0
Canada	1971	57.1	32.1	5.8	100.0
	1981	33.8	37.8	24.2	100.0

## 7.10 Annual estimates of household facilities and equipment, 1982

Item	Estimated households 1982 (May) '000	Percentage of households			
		1982 (May)	1981 (May)	1980 (May)	1979 (May)
Total households	8,254	100.0	100.0	100.0	100.0
Principal heating facilities					
Furnaces	6,100	73.9	75.4	75.5	76.5
Oil	2,362	28.6	31.8	34.5	37.7
Gas	3,497	42.4	41.3	39.1	37.1
Electricity	85	1.0	1.1	0.7	0.8
Wood	145	1.8	1.1	1.0	0.7
Coal and other	11	0.1	0.2	0.1	0.1
Other equipment	2,154	26.1	24.6	24.5	23.5
Oil	168	2.0	2.5	2.8	3.7
Gas	83	1.0	0.9	1.0	1.3
Electricity	1,692	20.5	19.4	18.8	17.2
Wood	206	2.5	1.6	1.8	1.2
Coal and other	5	0.1	0.1	0.2	0.1
Cooking fuel					
Electricity	7,495	90.8	90.7	89.4	88.7
Piped gas	522	6.3	6.0	6.9	7.2
Bottled gas	87	1.1	1.2	1.5	1.4
Wood or coal	77	0.9	1.0	1.1	1.2
Kerosene, oil or other	58	0.7	0.9	0.9	1.3
No cooking fuel	16	0.2	0.2	0.1	0.2
Fuel used for piped hot water supply					
Electricity	4,158	50.4	49.7	51.8	50.6
Gas	3,249	39.4	38.7	36.6	35.6
Oil	725	8.8	9.8	9.9	11.9
Coal, wood or other	28	0.3	0.3	0.4	0.4
No hot water supply	94	1.1	1.5	1.3	1.6
Running water	8,209	99.5	99.4	99.4	99.3
Bath or shower (exclusive use): one	6,873	83.3	80.6	81.3	81.9
Two or more	1,279	15.5	17.8	17.1	16.1
Flush toilet	8,169	99.0	99.0	98.7	98.5
Refrigerators and home freezers					
Electric refrigerators	8,227	99.7	99.4	99.6	99.4
Home freezers	4,483	54.3	52.8	51.0	48.9
Washing machines					
Automatic	5,506	66.7	64.9	64.5	60.5
Other electric	879	10.6	11.8	12.8	15.2
Clothes dryers	5,470	66.3	63.9	63.2	60.0
Telephones	8,083	97.9	97.6	97.6	97.2
Radios					
All types, except car	8,152	98.8	98.4	98.7	98.4
FM receivers	7,461	90.4	88.7	87.6	86.1
TV sets					
All types: one	4,886	59.2	58.5	59.4	62.3
Two or more	3,215	39.0	39.3	38.3	35.5
Colour	7,013	85.0	82.9	81.1	76.7
Black and white	3,546	43.0	45.3	47.0	49.4
Cable television	4,923	59.6	56.5	54.9	51.8
Record players	6,598	79.9	79.9	79.8	77.3
Automobiles					
One automobile	4,321	52.4	53.6	53.7	54.7
Two or more automobiles	2,289	27.7	26.4	26.1	23.2
Miscellaneous					
Window-type air conditioners	819	9.9	11.1	11.4	11.5
Central-unit air conditioners	503	6.1	5.7	5.3	5.0
Automatic dishwashers	2,747	33.3	31.3	28.6	26.3
Adult-size bicycles	3,924	47.5	2	44.4	43.2
Snowmobiles	699	8.5	2	9.7	1
Snowblowers	3	3	2	11.0	1
Lawnmowers - power	3	3	2	55.9	1
Boats	1,312	15.9	2	15.2	1
Overnight camping equipment	2,316	28.1	2	27.0	1
Downhill snow skis	1,368	16.6	2	15.2	1
Cross-country snow skis	2,097	25.4	2	22.9	1
Vacation homes	523	6.3	2	6.3	1
Condominium (owned)	184	2.2	1.4	1.6	1.5

<sup>1</sup>Data not collected in 1979.<sup>2</sup>Data not collected in 1981.<sup>3</sup>Data not collected in 1982.

7.11 Price indexes of residential and non-residential building materials and wage rates, 1971-82 (1971 = 100)

Year	Residential input indexes			Non-residential input indexes		
	Building materials	Labour	Total	Building materials	Labour	Total
1971	100.0	100.0	100.0	100.0	100.0	100.0
1972	109.8	110.6	110.1	104.9	111.0	107.8
1973	124.0	121.8	123.2	113.1	122.3	117.3
1974	135.2	133.9	134.7	137.3	134.7	126.1
1975	139.7	151.6	144.0	147.0	154.1	150.4
1976	153.6	172.8	160.5	156.6	175.9	165.7
1977	166.2	193.9	175.5	165.6	195.4	179.7
1978	184.1	206.2	192.0	179.4	208.4	193.2
1979	207.0	219.5	211.4	208.7	221.3	214.6
1980	215.1	236.3	222.7	230.2	238.2	234.0
1981	236.4	258.5	244.3	253.3	260.2	256.6
1982	244.4	282.5	258.1	275.3	284.3	279.5

7.12 Construction wage rates indexes for selected cities (1971 = 100)

City	1975	1976	1977	1978	1979	1980	1981	1982
St. John's (Nfld.)	199.0	242.3	271.5	290.8	306.5	328.9	378.1	409.5
Halifax	152.9	170.5	190.0	200.6	224.5	240.7	270.3	296.7
Saint John (NB)	175.8	195.4	215.2	228.6	251.8	272.6	308.1	338.2
Québec	178.6	196.0	223.6	243.8	256.0	280.9	304.9	333.0
Chicoutimi	182.6	200.7	228.5	250.8	263.9	289.7	314.4	342.0
Montréal	155.9	171.3	193.6	211.3	221.9	243.5	264.2	288.0
Ottawa	158.0	183.2	204.2	217.9	234.2	250.8	272.4	296.3
Toronto	151.8	173.6	192.3	204.4	218.8	233.1	251.7	271.9
Hamilton	145.7	165.8	181.3	192.4	205.0	218.0	235.6	254.9
St. Catharines	150.2	177.2	195.9	206.5	219.3	234.2	254.0	275.9
Kitchener	148.3	168.9	187.1	197.9	212.9	228.7	249.4	272.6
London	154.6	177.7	196.9	208.2	223.4	239.6	260.3	283.9
Sudbury	136.1	159.6	177.6	188.3	201.1	214.5	232.1	251.5
Windsor	140.2	162.5	179.3	191.2	206.1	220.7	239.2	261.1
Thunder Bay	154.2	187.0	202.0	213.6	227.7	242.9	263.8	287.2
Winnipeg	159.4	194.6	224.1	234.5	251.9	274.5	301.2	334.3
Regina	179.0	210.8	233.8	247.2	264.3	290.6	325.9	352.8
Saskatoon	178.4	211.0	234.1	247.8	264.7	291.3	326.5	353.9
Calgary	162.1	191.7	214.5	228.4	242.3	264.7	291.7	323.1
Edmonton	162.4	193.4	215.9	230.7	244.6	265.6	291.5	323.9
Vancouver	157.9	180.2	198.4	212.2	224.8	246.5	270.7	299.2
Victoria	159.0	181.9	200.4	213.8	226.2	247.7	271.7	300.3
Total	156.3	179.1	199.6	213.2	227.0	245.5	267.7	292.3

7.13 Output price indexes of non-residential construction, for selected cities, 1975-82 (mid-1976 = 100)

Year and city	Office building	High school	Light industrial building
Montréal			
1975	99.4	98.1	96.3
1976	99.9	101.1	100.0
1977	100.3	107.3	104.0
1978	106.0	109.2	105.1
1979	110.4	117.5	109.3
1980	119.8	128.4	124.3
1981	139.7	139.8	136.6
1982	155.6	152.0	147.7
Ottawa			
1975	94.9	98.6	94.0
1976	98.4	100.8	100.0
1977	101.9	105.4	101.3
1978	101.7	108.8	107.5
1979	110.0	119.1	120.2
1980	122.5	129.3	137.0
1981	136.8	137.1	147.2
1982	149.9	147.9	157.6

### 7.13 Output price indexes of non-residential construction, for selected cities, 1975-82 (mid-1976 = 100) (concluded)

Year and city	Office building	High school	Light industrial building
Toronto			
1975	104.2	97.9	102.8
1976	101.2	101.3	100.0
1977	98.1	106.6	100.7
1978	104.2	113.6	107.8
1979	111.6	129.0	119.9
1980	123.8	145.2	139.7
1981	144.5	157.7	155.0
1982	158.3	174.2	168.7
Vancouver			
1975	91.7	95.8	96.7
1976	98.1	102.6	100.0
1977	104.6	107.8	103.7
1978	108.8	117.5	110.0
1979	117.4	128.7	121.0
1980	133.6	142.1	140.3
1981	159.2	157.6	155.2
1982	175.6	171.6	168.4

### 7.14 Highway construction price indexes (1971 = 100)

Province	Year <sup>1</sup>	0	1	2	3	4	5	6	7	8	9
Newfoundland	1960	70.8	56.8	61.9	57.4	61.5	67.8	73.6	65.4	68.6	66.1
	1970	82.6	100.0	101.1	109.6	129.0	128.0	111.3	127.4	141.6	149.6
	1980	149.4	205.1	..	..	..	..	..	..	..	..
Nova Scotia	1960	79.8	67.4	66.2	54.7	65.0	78.8	78.3	82.7	80.8	83.0
	1970	90.4	100.0	107.2	118.8	164.1	185.0	176.2	195.4	209.2	224.9
	1980	248.7	290.2	..	..	..	..	..	..	..	..
New Brunswick	1960	84.3	87.1	86.5	89.0	90.3	89.9	90.2	89.7	88.7	89.0
	1970	105.7	100.0	123.9	139.3	191.8	188.6	209.4	226.8	240.2	250.7
	1980	296.4	349.2	..	..	..	..	..	..	..	..
Quebec	1960	..	..	..	..	79.6	76.9	82.6	71.4	66.4	69.2
	1970	87.2	100.0	106.6	120.5	154.0	180.7	190.5	200.6	215.3	235.2
	1980	277.1	337.0	..	..	..	..	..	..	..	..
Ontario	1960	65.2	60.8	67.0	76.9	75.2	87.5	95.7	95.0	92.1	93.6
	1970	96.8	100.0	106.3	114.5	149.5	164.2	172.4	186.9	202.4	221.2
	1980	248.9	302.5	..	..	..	..	..	..	..	..
Manitoba	1960	72.9	62.6	67.6	75.3	77.5	83.5	95.7	96.3	88.2	90.5
	1970	100.9	100.0	111.3	126.3	166.8	172.5	197.6	204.7	226.0	250.0
	1980	277.2	205.7	..	..	..	..	..	..	..	..
Saskatchewan	1960	71.6	68.0	66.9	69.8	79.4	98.2	114.3	93.5	84.9	89.8
	1970	98.5	100.0	104.4	129.6	175.8	210.4	206.6	231.9	268.9	283.4
	1980	290.6	323.9	..	..	..	..	..	..	..	..
Alberta	1970	..	100.0	99.5	128.6	184.7	209.7	200.5	222.9	257.0	285.8
	1980	320.4	334.0	..	..	..	..	..	..	..	..
British Columbia	1960	81.8	71.9	68.6	69.7	76.3	91.9	93.3	85.9	91.1	103.0
	1970	96.7	100.0	95.7	101.6	170.2	183.2	213.2	215.3	214.2	223.6
	1980	257.4	307.3	..	..	..	..	..	..	..	..
Canada <sup>2</sup>	1960	72.1	65.0	67.6	72.2	76.2	83.0	89.4	86.9	84.8	88.7
	1970	92.7	100.0	105.1	118.3	158.7	177.5	185.1	198.2	214.4	232.2
	1980	262.8	311.6	..	..	..	..	..	..	..	..

<sup>1</sup>Within decade.<sup>2</sup>The Canada index includes seven provinces from 1964, when Quebec was added. Alberta was included from 1971, Prince Edward Island is excluded throughout.

7.15 Value of new and repair construction work purchased, 1977-83<sup>1</sup>

Year	New \$'000,000	Repair \$'000,000	Total \$'000,000	Total construction as percentage of gross national expenditure
1977	30,130	5,673	35,803	17.1
1978	31,910	6,280	38,190	16.6
1979	35,847	7,176	43,023	16.4
1980	40,153	8,174	48,327	16.6
1981	47,859	9,025	56,884	17.2
1982	46,208	9,535	55,743	16.0
1983	45,406	10,138	55,544	—

<sup>1</sup>Actual expenditures 1977-81; preliminary actual 1982; intentions 1983.

7.16 Value of construction work purchased, by contractors and others, 1977-83<sup>1</sup> (million dollars)

Item	1977	1978	1979	1980	1981	1982	1983
Contract construction	28,945	30,812	34,721	36,221	42,055	39,920	39,651
New	25,347	26,739	30,045	31,195	36,465	34,035	33,386
Repair	3,598	4,073	4,676	5,026	5,590	5,885	6,265
Other construction <sup>2</sup>	6,858	7,378	8,302	12,106	14,829	15,823	15,893
New	4,783	5,171	5,802	8,958	11,394	12,173	12,020
Repair	2,075	2,207	2,500	3,148	3,435	3,650	3,870
Total construction	35,803	38,190	43,023	48,327	56,884	55,743	55,544
New	30,130	31,910	35,847	40,153	47,859	46,208	45,406
Repair	5,673	6,280	7,176	8,174	9,025	9,535	10,138

<sup>1</sup>Actual expenditures 1977-81; preliminary actual 1982; intentions 1983.

<sup>2</sup>Work done by the labour forces of utilities, government departments and other employers not primarily engaged in the construction industry.

7.17 Labour content, cost of materials and value of work purchased in construction, by province and by employer, 1979-83<sup>1</sup>

Province and employer	Year	Labour content		Cost of materials used \$'000,000	Value of work performed \$'000,000
		No.	Value \$'000,000		
PROVINCE					
Newfoundland	1979	17,337	321.9	320.1	862.9
	1980	15,696	298.2	336.0	850.2
	1981	13,875	303.8	435.8	1,034.4
	1982	13,483	338.2	500.6	1,196.4
	1983	14,610	387.6	610.2	1,440.0
Prince Edward Island	1979	3,784	63.3	79.5	183.3
	1980	2,631	60.1	74.8	176.0
	1981	2,262	54.6	66.0	153.6
	1982	2,362	57.9	70.8	162.0
	1983	2,001	52.3	64.2	146.2
Nova Scotia	1979	20,615	393.8	413.2	1,079.8
	1980	21,831	424.5	457.5	1,183.3
	1981	21,361	444.6	500.5	1,305.2
	1982	20,839	477.2	581.6	1,511.9
	1983	21,226	515.7	699.9	1,765.4
New Brunswick	1979	22,193	401.6	399.5	1,070.5
	1980	14,747	358.1	365.7	958.0
	1981	15,339	383.4	382.6	1,022.3
	1982	15,682	395.4	399.5	1,068.9
	1983	13,883	371.0	381.7	1,014.7
Quebec	1979	140,970	3,135.0	3,231.4	9,124.6
	1980	128,063	3,192.7	3,279.1	9,352.4
	1981	129,861	3,487.7	3,664.0	10,308.8
	1982	125,250	3,501.6	3,598.5	10,348.5
	1983	119,058	3,521.8	3,672.6	10,476.8
Ontario	1979	216,714	4,479.2	4,450.9	11,570.4
	1980	212,281	4,839.6	4,741.5	12,437.5
	1981	215,860	5,488.4	5,362.8	14,188.5
	1982	208,417	5,662.5	5,384.3	14,344.5
	1983	188,745	5,430.9	5,238.3	13,961.2
Manitoba	1979	26,577	520.9	580.5	1,470.0
	1980	25,561	522.7	515.3	1,397.8
	1981	23,499	523.7	572.1	1,539.0
	1982	19,986	490.3	532.1	1,425.3
	1983	19,603	509.4	546.9	1,489.9
Saskatchewan	1979	37,768	766.5	771.7	2,103.2
	1980	36,329	790.8	889.6	2,278.4
	1981	35,037	848.7	1,010.6	2,599.6
	1982	30,760	803.9	947.6	2,452.2
	1983	28,835	796.5	954.1	2,458.2

### 7.17 Labour content, cost of materials and value of work purchased in construction, by province and by employer, 1979-83<sup>1</sup> (concluded)

Province and employer	Year	Labour content		Cost of materials used \$'000,000	Value of work performed \$'000,000
		No.	Value \$'000,000		
<b>PROVINCE</b>					
Alberta	1979	141,094	3,387.9	3,354.3	9,373.0
	1980	154,980	3,829.6	4,904.3	11,693.5
	1981	152,031	4,355.5	5,881.9	14,490.3
	1982	134,915	4,320.0	5,653.2	14,002.6
	1983	119,028	4,049.7	5,443.1	13,431.0
British Columbia, Yukon and Northwest Territories	1979	82,251	2,144.3	2,240.5	6,185.2
	1980	94,670	2,661.8	3,032.1	7,999.7
	1981	102,689	3,286.8	3,931.4	10,242.2
	1982	87,139	2,948.5	3,483.5	9,230.9
	1983	83,117	2,985.7	3,496.5	9,360.2
Canada	1979	709,303	15,614.4	15,841.6	43,022.9
	1980	706,789	16,978.1	18,595.9	48,326.8
	1981	711,814	19,177.2	21,807.7	56,883.9
	1982	658,822	18,995.5	21,151.7	55,743.2
	1983	610,106	18,620.6	21,107.5	55,543.6
<b>EMPLOYER</b>					
Contractors	1979	565,888	12,663.2	12,732.7	34,720.9
	1980	539,421	13,113.1	13,219.3	36,221.0
	1981	555,467	15,156.3	15,392.6	42,055.4
	1982	497,714	14,581.6	14,406.7	39,919.7
	1983	463,853	14,374.6	14,280.0	39,650.7
Utilities	1979	65,058	1,452.0	1,553.5	4,352.1
	1980	68,049	1,667.8	1,735.8	4,819.4
	1981	68,908	1,891.7	2,130.2	5,651.5
	1982	77,112	2,248.1	2,478.3	6,620.1
	1983	66,164	2,062.0	2,293.1	6,194.7
Governments	1979	36,686	671.9	541.1	1,742.3
	1980	36,397	727.2	582.7	1,895.3
	1981	34,111	761.5	699.9	2,081.8
	1982	37,075	881.5	811.7	2,398.0
	1983	35,718	899.3	823.5	2,433.6
Miscellaneous	1979	41,671	827.3	1,014.3	2,207.6
	1980	62,922	1,470.0	3,058.1	5,391.1
	1981	53,328	1,367.7	3,584.9	7,095.2
	1982	46,932	1,284.3	3,455.1	6,805.4
	1983	44,371	1,284.7	3,710.9	7,264.6

<sup>1</sup>Actual expenditures 1979-81; preliminary actual 1982; intentions 1983.

### 7.18 Value of building permits issued, by province, 1979-82 with totals for 1979-82 (million dollars)

Province or territory and year	Residential construction			Non-residential construction			Total
	New	Improvements	Total	Industrial	Commercial	Institutional and governmental	
Newfoundland	1979 57.3	9.5	66.8	6.0	45.1	8.1	126.0
	1980 77.7	12.1	89.8	7.1	28.6	17.2	142.7
	1981 73.8	9.2	83.0	5.3	49.4	10.0	147.7
	1982 35.2	7.2	42.4	6.3	15.7	37.9	102.3
Prince Edward Island	1979 43.7	5.3	49.0	8.0	14.8	7.0	78.8
	1980 20.9	3.9	24.8	7.8	10.7	2.5	45.8
	1981 14.4	4.4	18.8	3.6	13.9	7.0	43.3
	1982 12.7	5.3	18.0	3.9	11.0	16.4	49.3
Nova Scotia	1979 158.8	33.8	192.6	23.0	107.6	41.7	364.9
	1980 141.7	35.5	177.2	37.9	75.0	38.1	328.2
	1981 156.9	39.4	196.3	43.9	76.2	60.1	376.5
	1982 139.5	41.9	181.4	18.5	58.7	65.3	323.9
New Brunswick	1979 83.5	15.7	99.2	26.7	59.3	65.2	250.4
	1980 56.3	16.8	73.1	22.2	45.8	60.5	201.6
	1981 46.1	18.5	64.6	31.4	79.3	49.0	224.3
	1982 43.6	21.4	65.0	38.0	33.1	44.3	180.4
Quebec	1979 1,222.6	213.2	1,435.8	293.5	493.9	240.6	2,463.8
	1980 1,059.6	234.5	1,294.1	335.2	562.1	321.6	2,513.0
	1981 1,229.6	251.6	1,481.2	325.2	656.7	400.6	2,863.7
	1982 893.9	267.0	1,160.9	173.7	547.8	245.6	2,128.0
Ontario	1979 2,061.1	312.4	2,373.5	576.4	1,032.1	344.5	4,326.5
	1980 1,646.2	313.8	1,960.0	710.3	1,306.9	427.7	4,404.9
	1981 2,568.2	367.1	2,935.3	784.1	1,291.1	419.1	5,429.6
	1982 1,746.4	338.5	2,084.9	468.4	1,170.6	487.2	4,211.1

7.18 Value of building permits issued, by province, 1979-82 with totals for 1979-82 (million dollars) (concluded)

Province or territory and year		Residential construction			Non-residential construction			Total
		New	Improve-ments	Total	Indus-trial	Commer-cial	Institutional and governmental	
Manitoba	1979	129.4	20.1	149.5	25.2	118.1	46.7	339.5
	1980	79.2	26.1	105.3	24.9	99.2	37.9	267.3
	1981	132.0	24.5	156.5	37.2	99.7	47.4	340.8
	1982	109.3	28.1	137.4	28.2	57.1	43.4	266.1
Saskatchewan	1979	343.3	25.5	368.8	17.6	208.7	72.2	667.3
	1980	217.4	26.3	243.7	32.8	195.0	74.1	545.6
	1981	249.2	25.8	275.0	56.4	165.9	77.5	574.8
	1982	213.4	25.0	238.4	17.4	98.5	76.2	430.5
Alberta	1979	1,696.6	109.4	1,806.0	149.7	1,107.9	291.0	3,354.6
	1980	1,629.6	114.1	1,743.7	484.0	1,348.9	438.4	4,015.0
	1981	2,258.8	114.4	2,373.2	209.6	2,069.9	478.2	5,130.9
	1982	970.3	89.0	1,059.3	124.8	1,005.3	721.6	2,911.0
British Columbia	1979	1,169.9	36.8	1,206.7	186.1	529.7	211.7	2,134.2
	1980	1,605.4	139.0	1,744.4	237.9	643.3	325.4	2,951.0
	1981	2,023.2	197.4	2,220.6	224.1	717.2	393.9	3,555.8
	1982	976.5	158.4	1,134.9	216.3	483.3	326.6	2,161.1
Yukon	1979	15.1	1.2	16.3	2.5	8.6	3.3	30.7
	1980	9.7	1.2	10.9	10.9	5.1	4.5	31.4
	1981	7.0	1.2	8.2	9.3	7.7	11.3	36.5
	1982	3.7	1.1	4.8	0.8	3.4	9.0	18.0
Northwest Territories	1979	2.2	0.5	2.7	0.8	1.6	2.2	7.3
	1980	0.5	0.4	0.9	0.3	1.0	3.4	5.6
	1981	1.3	0.6	1.9	1.1	2.7	5.7	11.4
	1982	5.0	0.4	5.4	0.1	0.7	0.8	7.0
Total	1979	6,910.6	856.4	7,767.0	1,315.5	3,727.2	1,334.2	14,143.9
	1980	6,544.2	923.7	7,467.9	1,911.4	4,321.5	1,751.3	15,452.1
	1981	8,760.4	1,054.2	9,814.6	1,731.2	5,229.9	1,959.8	18,735.5
	1982	5,149.5	983.4	6,132.9	1,096.3	3,485.2	2,074.4	12,788.8

7.19 Estimated value of proposed construction as indicated by building permits issued in 50 municipalities (million dollars)

Province and municipality	1979	1980	1981	1982	Province and municipality	1979	1980	1981	1982
NFLD.					Oshawa	37.8	56.8	91.5	41.7
St. John's	38.6	50.8	54.0	62.7	Ottawa	102.6	143.2	238.1	247.0
					Scarborough (borough)	231.2	206.6	304.5	247.4
PEI					Thunder Bay	59.2	31.0	49.0	30.9
					Toronto	366.3	526.9	502.0	546.9
Charlottetown	12.3	6.2	11.5	21.3	Windsor	201.2	127.7	72.1	46.1
					York (borough)	19.9	28.8	33.6	25.6
NS					York North (borough)	252.5	301.2	334.5	298.7
Halifax	38.2	33.3	67.6	87.1	MAN.				
					Fort Garry				
NB					St. Boniface				
					St. James				
Fredericton	18.0	18.2	22.1	28.3	Winnipeg	260.5	210.6	265.7	203.9
Moncton	36.7	17.5	13.7	20.3					
Saint John	70.0	48.6	53.6	25.3	SASK.				
QUE.					Moose Jaw	25.4	15.3	21.2	15.6
LaSalle	27.4	17.3	13.8	14.6	Prince Albert	47.9	34.9	28.4	23.7
					Regina	179.1	139.3	184.3	150.4
Montréal	212.2	294.9	604.7	557.9	Saskatoon	256.1	211.8	188.8	141.7
Québec	97.7	148.7	159.8	73.2					
Ste-Foy	34.9	28.3	59.0	38.6					
St-Laurent	30.1	68.3	59.7	38.5	ALTA.				
Sept-Îles	20.0	17.0	2.2	2.7	Calgary	1,103.0	1,394.4	2,445.5	1,051.5
Sherbrooke	24.9	29.9	37.4	16.4	Edmonton				
Trois-Rivières	30.8	35.7	31.3	18.3	Jasper Place	761.7	843.1	1,137.6	778.2
ONT.					Lethbridge	47.3	61.5	89.5	66.4
Brampton	131.4	176.4	160.3	177.9	Medicine Hat	57.0	50.8	57.5	47.3
					Red Deer	99.0	117.0	120.6	50.9
Burlington	60.4	49.6	42.8	28.8					
Etobicoke (borough)	107.7	114.2	211.3	109.1	BC				
Hamilton	77.5	114.0	111.3	92.0	Burnaby District	160.2	116.8	168.8	149.1
Kitchener	88.7	31.7	61.4	40.2	Richmond Township	94.8	162.4	168.1	114.9
London	94.0	84.0	128.2	157.7	Surrey District	165.2	261.4	221.7	207.2
London Township	5.4	3.2	3.6	2.0	Vancouver	365.7	443.8	419.7	380.1
Mississauga	267.3	438.3	649.0	221.4	Victoria	4.5	59.4	111.3	55.4
Nepean	55.5	16.9	51.3	54.2					

## 7.20 Estimated value of building permits issued in metropolitan areas (million dollars)

Metropolitan area	1979	1980	1981	1982	Metropolitan area	1979	1980	1981	1982
Calgary	1,103.0	1,394.4	2,445.5	1,051.5	Saint John	79.2	56.3	64.8	28.3
Chicoutimi-Jonquière	82.0	83.5	90.4	47.5	St. Catharines-Niagara	119.1	116.9	126.1	87.2
Edmonton	985.9	1,269.9	1,374.1	915.8	St. John's	70.0	103.2	115.8	72.5
Halifax	131.3	115.6	168.3	171.4	Saskatoon	256.1	211.8	188.8	144.7
Hamilton	200.9	218.6	223.8	180.0	Sudbury	79.2	35.2	43.3	37.3
Kitchener	157.2	100.9	144.3	90.9	Thunder Bay	66.2	34.0	53.0	32.8
London	113.4	97.7	143.1	166.5	Toronto	1,861.8	2,288.3	2,901.7	2,118.9
Montréal	1,001.1	1,159.4	1,577.1	1,244.8	Vancouver	1,065.2	1,462.7	1,597.1	1,247.8
Oshawa	71.1	80.8	128.1	103.2	Victoria	159.0	259.1	326.7	167.0
Ottawa-Hull	315.6	322.5	500.3	488.4	Windsor	242.6	146.3	86.9	52.6
Québec	328.6	322.7	366.1	243.7	Winnipeg	263.1	213.3	269.3	206.6
Regina	179.1	139.3	184.3	150.4					

## 7.21 Capital expenditures<sup>1</sup> on construction and on machinery and equipment, in current and constant (1971) dollars, 1974-83

Year	Capital expenditures (\$'000,000)						Capital expenditures as percentage of gross national expenditure <sup>2</sup>	
	Construction		Machinery and equipment		Total			
	Current dollars	Constant 1971 dollars	Current dollars	Constant 1971 dollars	Current dollars	Constant 1971 dollars	Current dollars	Constant 1971 dollars
1974	20,771	14,975	12,111	9,952	32,882	24,927	23.2	23.0
1975	24,054	15,469	14,162	10,225	38,216	25,694	24.2	23.6
1976	28,144	16,259	15,492	10,468	43,636	26,727	23.4	22.8
1977	30,130	16,078	16,467	10,409	46,597	26,487	23.1	22.3
1978	31,912	15,821	18,448	10,633	50,360	26,454	22.7	21.6
1979	35,847	16,220	22,508	11,674	58,355	27,894	23.1	22.1
1980	40,157	16,951	26,036	12,104	66,193	29,055	23.6	22.9
1981	47,860	18,232	31,744	13,400	79,604	31,632	24.4	23.6
1982	46,208	16,386	28,871	11,286	75,079	27,672	21.9	21.8
1983	46,640	—	27,158	—	73,798	—	—	—

<sup>1</sup>Actual expenditures 1974-81; preliminary actual 1982; revised intentions 1983.

<sup>2</sup>The percentage is calculated by dividing "Gross Fixed Capital Formation", as defined by the National Income and Expenditure Accounts, by the total "Gross National Expenditure".

## 7.22 Summary of capital and repair expenditures, by economic sector 1979-83<sup>1</sup> (million dollars)

Type of enterprise and year	Capital			Repair		
		Construction	Machinery and equipment	Total	Construction	Machinery and equipment
Agriculture and fishing	1979	824.8	3,542.7	4,367.5	326.1	624.6
	1980	1,063.1	3,404.7	4,467.8	293.1	834.5
	1981	1,280.8	3,579.1	4,859.9	336.1	1,037.6
	1982	1,376.9	3,069.9	4,446.8	350.0	1,152.2
	1983	1,228.5	3,081.1	4,246.6	364.1	1,145.1
Forestry	1979	140.6	160.0	300.6	66.4	222.1
	1980	153.0	190.0	343.0	89.2	276.8
	1981	132.9	148.8	281.7	87.4	248.5
	1982	84.9	60.6	145.5	74.4	215.9
	1983	81.8	52.9	134.7	87.9	232.6
Mining, quarrying and oil wells	1979	4,675.5	979.1	5,654.6	528.9	1,206.7
	1980	6,908.6	1,535.1	8,443.7	797.4	1,474.4
	1981	7,804.2	2,200.4	10,004.6	692.3	1,987.6
	1982	7,501.8	1,963.3	9,465.1	693.3	1,874.9
	1983	8,197.3	1,634.3	9,831.6	748.7	1,923.2
Construction industry	1979	157.6	827.7	985.3	21.7	632.0
	1980	177.0	931.2	1,108.2	24.5	711.5
	1981	208.6	1,096.0	1,304.6	28.9	837.3
	1982	204.2	1,074.2	1,278.4	28.2	820.5
	1983	208.3	1,094.5	1,302.8	28.1	817.6
Manufacturing	1979	1,610.5	5,833.1	7,443.6	640.5	3,457.2
	1980	2,255.9	7,490.9	9,746.8	771.2	3,960.1
	1981	3,074.3	9,665.0	12,739.3	850.8	4,104.3
	1982	2,771.0	8,351.7	11,122.7	803.1	3,962.8
	1983	1,924.4	6,785.0	8,709.4	858.5	4,107.3

7.22 Summary of capital and repair expenditures, by economic sector 1979-83<sup>1</sup>  
(million dollars) (concluded)

Type of enterprise and year		Capital			Repair		
		Construc- tion	Machinery and equipment	Total	Construc- tion	Machinery and equipment	Total
Utilities	1979	6,183.7	5,576.2	11,759.9	1,125.8	2,704.5	3,830.3
	1980	6,716.5	6,046.5	12,763.0	1,267.5	3,171.0	4,438.5
	1981	8,588.1	7,655.4	16,243.5	1,442.3	3,623.3	5,065.6
	1982	10,273.9	7,626.4	17,900.3	1,469.6	3,949.0	5,418.6
	1983	9,125.1	7,581.8	16,706.9	1,610.4	4,248.8	5,859.2
Trade (wholesale and retail)	1979	503.7	1,071.0	1,574.7	166.5	225.8	392.3
	1980	543.6	1,185.1	1,728.7	171.2	237.8	409.0
	1981	595.4	1,403.8	1,999.2	189.8	259.3	449.1
	1982	535.9	1,199.6	1,735.5	181.7	253.5	435.2
	1983	513.5	1,240.2	1,753.7	189.2	261.2	450.4
Finance, insurance and real estate	1979	2,862.1	378.3	3,240.4	205.0	76.3	281.3
	1980	3,215.8	410.4	3,626.2	229.7	100.9	330.6
	1981	3,917.2	505.9	4,423.1	259.2	98.0	357.2
	1982	3,392.6	526.5	3,919.1	259.4	106.2	365.6
	1983	2,951.7	524.8	3,476.5	283.1	119.2	402.3
Commercial services	1979	566.5	3,067.1	3,633.6	99.5	326.3	425.8
	1980	670.9	3,483.6	4,154.5	112.3	369.9	482.2
	1981	723.7	3,760.0	4,483.7	123.4	464.8	588.2
	1982	774.6	3,262.4	4,037.0	110.4	421.1	531.5
	1983	609.4	3,305.1	3,914.5	121.4	424.6	546.0
Institutions	1979	1,327.7	362.5	1,690.2	270.4	98.1	368.5
	1980	1,625.1	506.3	2,131.4	293.4	126.1	419.5
	1981	1,882.3	605.8	2,488.1	401.9	142.0	543.9
	1982	2,109.3	637.8	2,747.1	454.3	151.9	606.2
	1983	2,290.2	667.0	2,957.2	459.0	164.3	623.3
Government departments	1979	5,376.6	710.0	6,086.6	1,075.7	224.4	1,300.1
	1980	5,813.8	852.5	6,666.3	1,262.9	280.3	1,543.2
	1981	6,516.9	1,124.1	7,641.0	1,380.9	360.6	1,741.5
	1982	7,292.3	1,098.2	8,390.5	1,659.6	360.0	2,019.6
	1983	7,522.0	1,253.9	8,775.9	1,699.8	368.8	2,068.6
Housing	1979	11,617.4	—	11,617.4	2,649.2	—	2,649.2
	1980	11,013.6	—	11,013.6	2,862.4	—	2,862.4
	1981	13,135.4	—	13,135.4	3,229.4	—	3,229.4
	1982	9,890.6	—	9,890.6	3,451.0	—	3,451.0
	1983	11,988.1	—	11,988.1	3,687.6	—	3,687.6
Total	1979	35,846.7	22,507.7	58,354.4	7,175.7	9,798.0	16,973.7
	1980	40,156.9	26,036.3	66,193.2	8,174.8	11,543.3	19,718.1
	1981	47,859.8	31,744.3	79,604.1	9,022.4	13,163.3	22,185.7
	1982	46,208.0	28,870.6	75,078.6	9,535.0	13,268.0	22,803.0
	1983	46,640.3	27,157.6	73,797.9	10,137.8	13,812.7	23,950.5

<sup>1</sup>Actual expenditures 1979-81; preliminary actual 1982; revised intentions 1983.

7.23 Capital and repair expenditures, by province, 1979-83<sup>1,2</sup> (million dollars)

Province or territory and year		Capital			Repair		
		Construc- tion	Machinery and equipment	Total	Construc- tion	Machinery and equipment	Total
Newfoundland	1979	733.7	300.9	1,034.6	128.6	276.7	405.3
	1980	709.8	377.4	1,087.2	140.1	284.8	424.9
	1981	878.0	361.2	1,239.2	156.0	330.5	486.5
	1982	1,054.3	370.6	1,424.9	141.9	394.6	446.5
	1983	1,196.7	406.5	1,603.2	158.3	312.7	471.0
Prince Edward Island	1979	145.0	56.4	201.4	38.1	28.0	66.1
	1980	135.2	71.9	207.1	41.0	28.0	69.0
	1981	108.6	67.9	176.5	44.7	31.9	76.6
	1982	114.9	66.8	181.7	47.1	34.2	81.3
	1983	113.0	80.0	193.0	46.7	34.8	81.5
Nova Scotia	1979	860.5	462.4	1,322.9	219.1	246.0	465.1
	1980	929.2	516.3	1,445.5	253.9	266.9	520.8
	1981	1,031.7	826.1	1,857.8	273.9	305.9	579.8
	1982	1,202.1	928.8	2,130.9	310.0	306.9	616.9
	1983	1,601.2	1,005.9	2,507.1	316.8	346.1	662.9

### 7.23 Capital and repair expenditures, by province, 1979-83<sup>1,2</sup> (million dollars) (concluded)

Province or territory and year	Capital			Repair		
	Construction	Machinery and equipment	Total	Construction	Machinery and equipment	Total
New Brunswick						
1979	914.1	738.1	1,652.2	155.9	214.4	370.3
1980	781.9	687.0	1,468.9	175.9	309.2	485.1
1981	818.0	689.3	1,507.3	203.8	345.7	549.5
1982	850.5	784.6	1,635.1	218.8	383.8	602.6
1983	767.3	572.9	1,340.2	237.9	423.3	661.2
Quebec						
1979	7,445.3	4,408.9	11,854.2	1,679.4	1,991.6	3,671.0
1980	7,494.6	5,324.3	12,818.9	1,859.6	2,421.3	4,280.9
1981	8,203.9	5,535.3	13,739.2	2,104.8	2,623.4	4,728.2
1982	8,110.9	4,884.1	12,995.0	2,237.7	2,663.8	4,901.5
1983	8,457.4	4,876.6	13,334.0	2,334.7	2,753.1	5,087.8
Ontario						
1979	9,220.0	7,873.3	17,093.3	2,350.4	3,574.4	5,924.8
1980	9,864.8	9,241.3	19,106.1	2,574.4	3,966.7	6,541.1
1981	11,345.7	11,409.4	22,755.1	2,855.8	4,323.0	7,178.8
1982	11,312.9	10,453.4	21,766.3	3,031.9	4,352.1	7,384.0
1983	11,510.2	10,642.5	22,152.7	3,225.2	4,538.2	7,763.4
Manitoba						
1979	1,185.1	855.8	2,040.9	284.7	394.1	678.8
1980	1,091.5	932.6	2,024.1	306.2	515.8	822.0
1981	1,186.2	1,090.1	2,276.3	352.5	589.6	942.1
1982	1,047.2	941.6	1,988.8	378.1	596.9	975.0
1983	1,197.7	883.3	2,081.0	398.2	640.1	1,038.3
Saskatchewan						
1979	1,752.9	1,350.7	3,103.6	350.8	444.9	795.7
1980	1,874.0	1,450.5	3,324.5	405.0	581.4	986.4
1981	2,192.1	1,835.2	4,027.3	407.0	716.8	1,123.8
1982	2,026.8	1,550.8	3,577.6	425.0	767.1	1,192.1
1983	2,209.1	1,409.2	3,618.3	458.2	806.4	1,264.6
Alberta						
1979	8,302.1	3,617.8	11,919.9	1,071.7	1,191.5	2,263.2
1980	10,335.5	3,874.5	14,210.0	1,358.9	1,434.6	2,793.5
1981	13,019.0	5,464.1	18,483.1	1,458.6	1,904.4	3,363.0
1982	12,458.5	4,942.1	17,400.6	1,544.1	2,038.0	3,582.1
1983	11,387.2	4,355.1	15,742.3	1,679.2	2,073.8	3,753.0
British Columbia						
1979	4,772.2	2,678.4	7,450.6	861.9	1,357.6	2,219.5
1980	6,222.2	3,297.0	9,519.2	1,017.7	1,645.5	2,663.2
1981	7,960.7	3,924.4	11,885.1	1,123.7	1,872.5	2,996.2
1982	6,679.1	3,365.0	10,044.1	1,125.2	1,697.1	2,822.3
1983	6,912.8	2,577.6	9,490.4	1,209.8	1,758.9	2,968.7
Yukon and Northwest Territories						
1979	515.8	165.0	680.8	35.1	78.8	113.9
1980	718.2	263.5	981.7	42.1	89.1	131.2
1981	1,115.9	541.3	1,657.2	41.6	119.6	161.2
1982	1,350.8	582.8	1,933.6	75.2	123.5	198.7
1983	1,287.7	348.0	1,635.7	72.8	125.3	198.1
Canada						
1979	35,846.7	22,507.7	58,354.4	7,175.7	9,798.0	16,973.7
1980	40,156.9	26,036.3	66,193.2	8,174.8	11,543.3	19,718.1
1981	47,859.8	31,744.3	79,604.1	9,022.4	13,163.3	22,185.7
1982	46,208.0	28,870.6	75,078.6	9,535.0	13,268.0	22,803.0
1983	46,640.3	27,157.6	73,797.9	10,137.8	13,812.7	23,950.5

<sup>1</sup>Actual expenditures 1979-81; preliminary actual 1982; revised intentions 1983.

<sup>2</sup>Capital expenditures on machinery and equipment include an estimate for "capital items charged to operating expenses", in the manufacturing, utilities and trade totals.

### 7.24 Value of building construction work performed, by type of structure<sup>1</sup> (million dollars)

Type of structure	1979		1980		1981		1982		1983	
	New	Repair	New	Repair	New	Repair	New	Repair	New	Repair
Building construction	20,233.1	4,482.8	21,568.3	4,971.8	25,851.4	5,685.8	22,269.6	5,937.1	21,794.7	6,306.7
Residential	11,617.6	2,649.2	11,009.6	2,862.5	13,135.3	3,229.4	9,890.6	3,451.0	10,726.8	3,687.5
Single detached	5,533.2	—	5,016.3	—	6,100.5	—	3,157.1	—	4,330.3	—
Semi-detached (incl. duplexes)	629.6	—	568.7	—	611.4	—	341.0	—	290.6	—
Apartments (incl. row housing)	2,394.9	—	2,431.9	—	3,086.0	—	3,630.8	—	3,081.6	—
Other	3,059.8	2,649.2	2,992.7	724.9	2,753.8	744.7	2,279.9	685.8	1,836.8	731.5
Industrial	1,522.3	545.8	2,279.9	724.9	2,753.8	744.7	2,279.9	685.8	1,836.8	731.5
Factories, plants, workshops, food canneries and smelters	1,322.4	451.7	1,935.8	564.1	2,284.9	628.1	1,852.4	573.2	1,417.8	614.5
Mine and mine mill buildings	136.5	39.5	289.6	98.2	452.1	93.2	411.1	88.1	396.0	89.8
Railway stations and roadway buildings	33.0	33.7	16.2	37.9	15.0	12.2	12.6	13.0	19.7	14.3
Railway shops, engine houses, water and fuel stations	30.4	21.0	38.3	24.7	1.8	11.2	3.8	11.5	3.3	12.9

### 7.24 Value of building construction work performed, by type of structure<sup>1</sup> (million dollars) (concluded)

Type of structure	1979		1980		1981		1982		1983	
	New	Repair	New	Repair	New	Repair	New	Repair	New	Repair
Commercial	4,411.8	661.7	5,178.5	733.7	6,145.5	840.7	6,025.0	843.3	5,079.2	899.8
Warehouses, storehouses and refrigerated storage	520.5	81.5	554.4	99.1	704.4	101.5	581.3	104.0	490.6	108.0
Grain elevators	46.6	15.0	50.2	18.2	58.8	20.0	89.2	22.7	175.4	25.5
Hotels, clubs, restaurants, cafeterias and tourist cabins	340.1	76.9	393.2	81.4	492.0	94.9	532.4	84.3	385.2	92.8
Office buildings	1,768.0	221.0	2,335.0	275.2	2,882.6	322.0	2,870.3	333.3	2,443.1	358.4
Stores, retail and wholesale	1,210.8	159.0	1,274.3	135.4	1,382.9	160.7	1,239.6	164.4	940.7	170.5
Garages and service stations	151.4	75.2	144.5	85.6	191.5	98.8	174.1	87.5	217.8	95.6
Theatres, arenas, amusement and recreational buildings	367.9	30.9	424.0	37.1	429.2	40.7	534.1	44.9	422.6	46.9
Laundries and dry-cleaning establishments	6.4	2.3	2.9	1.7	4.1	2.1	4.0	2.2	3.8	2.1
Institutional	1,532.1	299.2	1,834.3	322.6	2,129.3	442.0	2,401.3	494.3	2,617.1	497.3
Schools and other education buildings	758.1	150.4	788.0	154.4	903.6	253.4	940.0	280.6	953.5	276.1
Churches and other religious buildings	60.4	18.0	94.9	22.3	96.7	25.0	104.7	21.1	89.8	20.3
Hospitals, sanatoria, clinics and first-aid stations	453.0	90.5	673.0	103.9	772.7	113.8	959.0	143.1	1,160.2	153.0
Other	260.6	40.2	278.4	42.0	356.3	49.8	397.6	49.5	413.6	47.9
Other building	1,139.3	326.9	1,266.0	328.1	1,687.5	429.0	1,672.8	462.7	1,534.8	490.6
Farm buildings (excl. dwellings)	539.7	209.0	699.5	187.9	838.7	212.5	902.4	225.7	829.7	234.6
Broadcasting, radio and television, relay and booster stations, and telephone exchanges	147.7	32.3	174.8	32.3	255.0	41.6	209.2	46.1	171.0	49.2
Aircraft hangars	22.6	10.0	44.4	17.2	51.7	14.2	54.8	9.8	15.7	10.2
Passenger terminals, bus, boat, air and other	47.4	12.4	77.3	10.3	92.7	12.8	110.7	37.7	115.1	42.6
Armouries, barracks and drill halls	15.4	12.1	9.1	17.8	11.9	26.1	14.4	29.5	16.5	32.6
Bunkhouses, dormitories, camp										
cookeries, bush depots and camps	18.6	14.0	42.6	20.1	46.1	19.4	35.7	16.5	30.2	17.9
Laboratories	43.7	6.4	46.8	11.5	92.7	10.5	85.8	13.2	114.8	14.4
Other	304.2	30.6	171.5	31.0	298.7	91.9	259.8	84.2	241.8	89.1

<sup>1</sup>Actual expenditures 1979-81; preliminary actual 1982; intentions 1983.

### 7.25 Value of engineering construction work performed, by type of structure<sup>1</sup> (million dollars)

Type of structure	1979		1980		1981		1982		1983	
	New	Repair	New	Repair	New	Repair	New	Repair	New	Repair
Engineering construction	15,623.7	2,693.3	18,584.2	3,202.5	22,007.6	3,339.1	23,938.4	3,598.0	23,610.8	3,831.4
Marine	173.3	61.2	200.7	68.6	272.6	104.2	354.2	105.4	347.8	117.0
Docks, wharves, piers and breakwater	104.7	32.8	113.6	35.6	178.1	61.7	220.3	55.7	208.0	61.3
Retaining walls, embankments and riprapping	10.2	7.8	10.3	7.3	16.8	9.5	13.9	3.3	15.6	3.5
Canals and waterways	18.7	4.4	22.4	5.9	28.8	7.1	27.6	11.3	28.6	16.3
Dredging and pile driving	7.4	11.6	23.4	11.4	19.5	14.9	65.5	15.1	61.4	14.8
Dyke construction	12.7	0.8	20.3	0.8	13.2	1.1	9.5	1.2	12.3	1.0
Logging booms	0.6	1.2	0.9	1.4	0.8	1.0	0.5	1.1	0.5	1.3
Other	19.0	2.6	9.8	6.2	15.4	8.9	16.9	17.7	21.4	18.8
Road, highway and airport runways	2,693.6	686.6	2,899.3	831.3	3,255.2	836.3	3,334.4	969.6	3,320.3	986.0
Highway, road and street construction (incl. grading, scraping, oiling, filling)	2,577.4	660.8	2,747.3	805.9	3,108.7	801.9	3,142.6	928.5	3,108.3	931.0
Parking lots	32.2	9.9	43.9	8.9	36.6	10.4	63.4	14.9	78.2	27.5
Sidewalks and paths	58.8	7.6	66.6	6.8	65.0	10.0	70.1	10.9	74.3	12.2
Runways, landing fields and tarmac	25.2	8.3	41.5	9.7	44.9	14.0	58.3	15.3	59.5	15.3
Waterworks and sewage systems	1,700.2	163.1	1,832.6	163.8	1,946.5	198.1	2,052.6	242.3	2,182.7	238.1
Tile drains, drainage ditches and storm sewers	405.6	44.8	458.2	46.1	516.8	63.6	477.3	64.9	445.7	68.7
Water mains, hydrants and services	431.1	70.1	475.8	66.9	527.7	78.8	582.8	100.8	633.2	98.3
Sewage systems, disposal plants and connections	609.9	29.4	632.2	31.7	630.3	34.2	684.1	49.4	788.5	48.2
Water pumping stations and filtration plants	237.0	14.9	245.5	15.6	252.4	16.5	276.0	22.8	281.4	18.4
Water storage tanks	16.6	3.9	20.9	3.5	19.3	5.0	32.4	4.4	33.9	4.5

### 7.25 Value of engineering construction work performed, by type of structure<sup>1</sup> (million dollars) (concluded)

Type of structure	1979		1980		1981		1982		1983	
	New	Repair	New	Repair	New	Repair	New	Repair	New	Repair
Dams and irrigation	143.4	30.7	176.8	25.3	264.6	35.9	226.2	34.4	228.8	35.6
Dams and reservoirs	53.5	4.9	59.9	2.0	123.2	7.5	86.6	4.6	95.8	4.7
Irrigation and land reclamation projects	89.9	25.8	116.9	23.3	141.4	28.4	139.6	29.8	133.0	30.9
Electric power	4,001.9	277.6	3,985.0	312.0	4,448.3	352.6	5,068.0	359.7	5,338.0	384.5
Electric power generating plants, including water conveying and controlling structures	2,527.5	82.0	2,482.1	101.4	2,812.8	99.2	3,183.5	97.7	3,260.0	104.4
Electric transformer stations	5.4	2.5	14.0	3.6	11.8	4.9	9.2	3.2	3.2	3.7
Power transmission and distribution lines, and trolley wires	1,438.7	184.0	1,458.9	197.4	1,592.1	227.0	1,846.5	235.0	2,044.1	250.8
Street lighting	30.3	9.1	30.0	9.6	31.6	21.5	28.8	23.8	30.7	25.6
Railway, telephone and telegraph	1,072.1	548.5	1,234.0	616.7	1,332.3	537.6	1,522.7	544.2	1,376.1	601.0
Railway tracks and roadbeds	371.1	329.8	489.8	359.0	523.8	293.3	720.0	277.0	764.7	310.7
Signals and interlockers	27.6	43.9	15.2	57.4	—	33.9	0.1	33.5	—	37.2
Telegraph, telephone and cablevision lines, and underground and marine cables and microwave	673.4	174.8	729.0	200.3	808.5	210.4	802.6	233.7	611.4	253.1
Gas and oil facilities	4,014.1	628.6	5,874.6	834.6	6,358.9	751.3	6,683.7	756.0	7,357.2	828.6
Gas mains and services	113.6	17.6	152.0	18.7	168.6	12.1	188.0	14.2	190.9	16.9
Pumping stations, oil	0.7	0.4	0.4	0.3	—	—	—	—	—	—
Pumping stations, gas	0.2	—	1.9	0.2	—	—	—	—	—	—
Oil storage tanks	16.4	13.5	12.6	11.7	31.9	7.3	44.5	10.9	35.0	9.4
Gas storage tanks	6.4	1.8	3.1	1.8	0.1	—	0.1	0.3	0.1	0.1
Oil pipelines	28.3	26.2	59.1	26.3	106.2	29.3	35.1	27.0	53.6	25.2
Gas pipelines	67.0	5.3	343.6	9.7	89.1	4.6	59.6	4.8	72.3	5.6
Oil and gas wells	3,464.1	328.3	4,947.0	526.8	5,170.9	412.5	5,224.4	419.3	6,167.1	452.6
Oil refinery - processing units	91.6	122.0	134.6	142.0	526.4	184.7	752.6	188.7	551.5	204.0
Natural gas processing plants	225.8	113.5	220.3	97.1	265.7	100.8	379.4	90.8	286.7	114.8
Other engineering	1,825.1	297.0	2,381.2	350.2	4,129.2	523.1	4,696.6	586.4	3,459.9	640.6
Bridges, trestles, culverts	303.6	81.1	343.2	86.0	335.9	78.8	360.5	85.9	398.0	86.7
overpasses and viaducts	57.2	5.6	62.7	10.7	53.6	8.8	80.6	10.9	51.7	7.0
Tunnels and subways	5.8	1.4	7.3	1.6	2.9	1.2	5.0	0.7	6.0	0.4
Incinerators	146.6	21.0	180.8	25.8	195.1	29.2	267.7	33.4	263.6	35.4
Park systems, landscaping and sodding	57.4	4.5	57.3	3.7	63.1	3.8	67.8	5.7	77.2	6.1
Swimming pools, tennis courts and outdoor recreation facilities	543.0	6.1	735.2	11.8	887.8	16.5	917.9	18.2	830.1	16.8
Mine shafts and other below surface workings	119.4	71.8	159.3	70.6	175.7	60.9	196.1	65.7	178.9	69.9
Fences, snowsheds, signs and guard rails	592.1	105.5	835.4	140.0	2,415.1	323.9	2,801.0	365.9	1,654.4	418.3
Other engineering	—	—	—	—	—	—	—	—	—	—

<sup>1</sup>Actual expenditures 1979-81; preliminary actual 1982; intentions 1983.

### 7.26 Machinery and equipment price indexes, by industry of purchase (1971 = 100)

Division	1975	1976	1977	1978	1979	1980	1981	1982
Agriculture	136.4	144.4	153.7	171.9	194.2	219.1	238.0	251.8
Forestry	144.2	152.0	168.1	186.8	209.7	232.6	259.2	278.4
Fishing	131.8	141.5	158.8	175.0	199.9	227.5	259.8	281.3
Mines, quarries and oil wells	152.3	162.3	181.0	203.5	228.2	254.6	290.5	318.3
Manufacturing	143.3	152.8	169.0	190.2	213.5	240.3	268.9	291.5
Construction	131.0	136.8	153.9	174.7	196.3	218.1	239.1	257.8
Transportation, communication, storage and utilities	137.3	144.9	159.0	182.2	198.7	210.8	232.4	250.5
Trade	127.3	134.0	147.1	163.3	180.5	199.0	220.2	236.1
Finance, insurance and real estate	127.3	130.8	140.1	151.7	163.9	179.2	196.8	211.0
Community, business and personal services	124.2	125.6	135.8	148.9	161.3	176.2	191.9	203.5
Public administration	130.6	135.5	150.1	167.4	185.9	205.0	227.2	248.5
Total	137.5	145.0	159.2	179.2	198.9	219.4	243.2	262.3

### Sources

- 7.1, 7.2 Editorial Services, Canada Mortgage and Housing Corp.
- 7.4, 7.5 - 7.9 Housing, Family and Social Statistics Division, Statistics Canada.
- 7.3, 7.11 - 7.14, 7.26 Prices Division, Statistics Canada.
- 7.10 Consumer Income and Expenditure Division, Statistics Canada.
- 7.15 - 7.25 Construction Division, Statistics Canada.



**CHAPTER 8**

---

**FORESTS, FISH AND FURS**



## OVERVIEW

---

Forests, fish and fur-bearing animals were early sources of shelter, food and clothing. Production from these renewable resources continues to play a leading role in Canada's economy.

About 44% of Canada's area is forest land, 4.4 million square kilometres, with almost 2.6 million accessible for harvesting forest crops. Canada is a major exporter of forest products, notably newsprint and other paper goods, pulp and lumber.

In value of fish exports, Canada has been the world leader in recent years, although surpassed in quantity by Norway, Denmark, Japan and Chile.

About 60% of fur production comes from wildlife pelts and 40% from fur farms. Rising prices for Canadian wild furs encouraged trappers to extend their traplines. Many mink farms ceased operations in the early 1970s but the number has been increasing as value of pelts rose. In fox farming, production has been increasing since the mid-1960s as the market for long-haired furs improved.

## CHAPTER 8

---

# FORESTS, FISH AND FURS

---

<b>8.1</b>	<b>Forestry</b>	<b>263</b>
8.1.1	Forest resources	263
8.1.2	Forest depletion	264
8.1.3	Forest administration	265
8.1.4	Wood industries	267
8.1.5	Paper and allied industries	267
<b>8.2</b>	<b>Fisheries</b>	<b>268</b>
8.2.1	Federal government activities	268
8.2.2	Provincial activities	269
<b>8.3</b>	<b>The fur industry</b>	<b>270</b>
<b>8.4</b>	<b>Wildlife</b>	<b>272</b>
8.4.1	The Canadian Wildlife Service	272
8.4.2	Provincial wildlife	273
8.4.3	Territorial wildlife	273

---

## TABLES

8.1	Canada's forest inventory	275
8.2	Forest utilization	275
8.3	Forest fire losses	275
8.4, 8.5	Volume of wood cut	276
8.6-8.8	Lumber production	276
8.9-8.11	Pulp and paper shipments	278
8.12-8.18	Fishery products	279
8.19	Registered fishermen	284
8.20	Employees in fish processing	284
8.21	Fur farm production	285
8.22, 8.23	Wildlife pelts produced	285
8.24	Furs, exports and imports	286

## CHARTS

Chart 8.1	Production and exports of lumber	266
Chart 8.2	Exports of shellfish, fresh and frozen	269
Chart 8.3	Pelts produced on fur farms	271

## CHAPTER 8

# FORESTS, FISH AND FURS

Forests, fish and fur-bearing animals were sources of shelter, food and clothing from the time of earliest habitation in what is now Canada. Development of these resources and the industries resulting from their use have played a continuing role in Canada's growth.

Canada is a major exporter of forest products. Exports of wood, wood products and paper in 1981 amounted to \$13.0 billion which was 16% of the value of all commodity exports. This was up from the total of \$12.8 billion in 1980 which was 19% of the value. Paper and paperboard constituted 36% of all forest product exports; newsprint alone accounted for 30%.

The value of Canadian fishery product exports in 1981 exceeded \$1.5 billion, 20% higher than 1980 when they were almost \$1.3 billion. The United States remained the most important market, followed by the European Economic Community and Japan. Although the value of exports had declined in 1980 by 9% from 1979, Canada was still the world's leading fish exporting country in dollar terms. The 1980 drop in overall catches and value was attributable to resources declines, particularly Pacific salmon and herring, and to labour disputes and depressed markets.

In the fur industry, Canada's exports of undressed fur pelts in 1981 decreased by 16% from the previous year to total \$131 million. Exports of ranch-raised mink were the most valuable at \$26 million followed by beaver and muskrat.

## 8.1 Forestry

The forest sector is undergoing a transition from exploitation of the natural forest to one of more systematic forest management. In 1983 the federal government announced that \$15.5 million would be spent to support forestry training over the next three years. This would include federal funding for university contract research and development, grants to forestry schools and for student employment. Forestry programs are offered at the University of New Brunswick, Laval University, University of Toronto, Lakehead University, University of Alberta and University of British Columbia.

Another \$5.5 million for research and development was allotted to the areas of production, protection, basic research, harvesting and forest products.

The forest land area of Canada bears largely coniferous forests and makes up 64% of the land area in the provinces; of this forest land area, little more than 3% is reserved — parks and military areas where, by law, it is not available for growing and harvesting forest crops. In 1981, 145 million cubic metres of roundwood were cut, continuing a downward trend from 155 million cubic metres in 1980 and 162 million cubic metres in 1979. Timber harvesting and processing generated work for about 292,000 persons with \$6.6 billion in salaries and wages in 1981. The total value added by processing beyond the raw materials stage amounted to \$10.4 billion which was over 13.3% of the value added of all goods-producing industries.

British Columbia, Ontario and Quebec are the leading timber-producing provinces. In 1981 British Columbia sawmills produced 62% of all lumber in Canada, down from 68% in 1980, and most of the sulphate pulp and softwood plywood. Ontario and Quebec produced most of the groundwood pulp, newsprint and hardwood plywood.

There is a growing awareness of the importance of the forest in recreation, wildlife habitat and stream flow regulation. Recognition of these values is fostering a broader concept of forestry.

### 8.1.1 Forest resources

Forests cover a vast area in the north temperate zone but wide variations in physiography, soil and climate cause marked differences. Eight fairly well-defined regions can be recognized.

**Boreal forest region.** This region represents 82% of total forested area and forms a continuous belt from Newfoundland and the coast of Labrador west to the Rocky Mountains and northwest to Alaska. White spruce and black spruce are characteristic; other prominent conifers are tamarack, which ranges throughout, balsam fir and jack pine in the eastern and central portions, and alpine fir and lodgepole pine in the west and northwest. Although primarily coniferous there is a general admixture of deciduous white birch and poplar in the central and south-central portions. Spruce and larch increase to the north and the close forest gives way to open lichen-woodland finally changing into tundra. In the east along the southern border there is an intermixture of species: eastern white pine, red pine, yellow birch, sugar maple, black ash and eastern white cedar.

**Great Lakes–St. Lawrence forest region.** Extending from the Great Lakes and the St. Lawrence River lies a mixed forest of eastern white pine, red pine, eastern hemlock and yellow birch. With these are associated certain dominant broad-leaved species common to a deciduous forest region including sugar maple, red maple, red oak, basswood and white elm. Other species with wide ranges are the eastern white cedar and largetooth aspen and, to a lesser extent, beech, white oak, butternut and white ash. Boreal species such as white spruce, black spruce, balsam fir, jack pine, poplar and white birch are intermixed, and red spruce is abundant in certain central and eastern portions. This region extends westward into southeastern Manitoba but does not include the area north of Lake Superior.

**Subalpine forest region.** The mountain uplands of Alberta and British Columbia include characteristic coniferous species: Engelmann spruce, alpine fir and lodgepole pine. There is a close relationship with boreal regions, with black spruce, white spruce and trembling aspen. There are also some Douglas fir, western hemlock, western red cedar and amabilis fir. Other species are western larch, whitebark pine, limber pine and, on the Coast Mountains, yellow cypress and mountain hemlock.

**Montane forest region** occupies a large part of the interior uplands of British Columbia, part of the Kootenay Valley and a small area on the east side of the Rocky Mountains. It is an extension of the typical forest of the western mountain system in the United States. Ponderosa pine is characteristic in the south. Douglas fir is found throughout but particularly in the central and southern parts, and lodgepole pine and trembling aspen are general, the latter particularly in the north-central area. Engelmann spruce, alpine fir and white birch are found in the north. White spruce also grows here.

**Coast forest region.** This is part of the Pacific Coast forest of North America. Essentially coniferous, it consists of western red cedar, western hemlock, Sitka spruce in the north and Douglas fir in the south. Amabilis fir and yellow cypress grow throughout and, with mountain hemlock and alpine fir, are common at higher altitudes. Western white pine is found in the south, and western yew in widely scattered groups. Deciduous black cottonwood, red alder and bigleaf maple have a limited distribution. Arbutus and Garry oak grow on the southeast coast of Vancouver Island.

**Acadian forest region.** This covers the greater part of the Maritime provinces. Red spruce is characteristic but not exclusive. Associated with it are balsam fir, yellow birch and sugar maple, with some red pine, eastern white pine, jack pine and eastern hemlock. Beech has been drastically reduced in Nova Scotia, Prince Edward Island and southern New Brunswick by beech bark disease. Abundant species are white spruce, black spruce, red oak, white elm, black ash, red maple, white birch, grey birch and poplars. Eastern white cedar is present in New Brunswick.

**Columbia forest region.** A large part of the Kootenay Valley, the upper valleys of the Thompson and Fraser rivers and the Quesnel Lake area of British Columbia contains coniferous forest. Western red cedar and western hemlock are characteristic. Douglas fir has general distribution; western white pine, western larch, grand fir and western yew are found in southern parts. Engelmann spruce grows in the upper Fraser Valley and to some extent at upper levels. At lower elevations the forest merges with the montane forest region.

**Deciduous forest region.** Northern limits of the deciduous forest, widespread in the United States, extend into south-western Ontario between lakes Huron, Erie and Ontario. Here, with sugar maple, beech, white elm, basswood, red ash, white oak and butternut, are scattered other deciduous species including the tulip tree, cucumber tree, pawpaw, red mulberry, Kentucky coffee tree, redbud, black gum, blue ash, sassafras, mockernut hickory, pignut hickory, black oak and pin oak. Black walnut, sycamore and swamp white oak are confined largely to this region. Conifers are few but there is scattered distribution of eastern white pine, tamarack, eastern red cedar and eastern hemlock.

**Grasslands.** The prairies of Manitoba, Saskatchewan and Alberta support several species. Trembling aspen forms groves around wet depressions and continuous dense stands along the northern boundary. Other species of poplar grow along rivers, with willows and white spruce. There are sporadic stands of white birch, Manitoba maple, bur oak and ash. In British Columbia grassy valleys and low areas of the interior, there are scattered ponderosa pine, birch, poplar, spruce and mountain alder.

**Forest inventory.** Inventories of forest resources are made periodically by provincial authorities. The Canadian Forestry Service of Environment Canada compiles national statistics.

The 1981 national forest inventory reported on 4.4 million square kilometres (km<sup>2</sup>) of forest land (Table 8.1). Of this total, 49 000 km<sup>2</sup> are reserved by law for uses other than timber production. Almost 100% of production forest land of Canada has been inventoried.

The estimates of wood volume of timber, given in Table 8.1, are subject to revision as more complete inventories are compiled. Volumes reported in the 1981 national forest inventory are about 2% larger than those reported previously. The compilation is more standardized across the country than previously and is derived from more recent provincial inventories.

### 8.1.2 Forest depletion

The primary sources of Canada's current wood production are areas of Crown forest land (provincial and federal) and private forest land that are classed as productive. In addition to cutting, extensive forest depletion is caused by fire, insects, diseases and natural mortality. A total of 8,973 forest fires occurred in 1980, down from 10,063 in 1979, but covering a much greater area (Table 8.3).

In 1981, it was estimated that fire losses covered 5.1 million hectares, still more than in 1980. Both years substantially exceeded totals for all the previous years as recorded for the provinces back to 1918, and for Yukon and Northwest Territories since 1946.

During these two most severe fire seasons, in terms of fire starts, area burned and suppression expenditures, forest fire-fighting agencies in west-central Canada did not have enough aircraft and other equipment to cope with the problem. Help had to be obtained from other parts of the country and on several occasions from the United States.

To deal with increased hazards caused by such factors as climate changes and insect blights, the Canadian Interagency Fire Centre (CIFIC) opened for business in Winnipeg on June 1, 1982. The Canadian Forestry Service, Parks Canada, Indian and Northern Affairs, the Yukon and Northwest Territories and nine provincial governments have shared in the costs of establishing and operating this joint national undertaking.

CIFIC's immediate objective is to provide operational fire control services to member agencies that will gather, analyze and disseminate fire management information, ensuring economical sharing of resources. The centre will also develop programs to actively promote, develop, refine, standardize and provide services to member agencies to improve the level of forest fire management in Canada.

In April 1983 Environment Canada announced federal government plans to purchase 20 water bombers over the next four years to help provinces meet peak fire season needs.

An apparent surplus of timber exists in Canada although shortages of softwood are emerging in all regions, which could be overcome in part by more intensive forest management and silvicultural techniques. Greater utilization of individual trees and of certain hardwood species could extend the resource. The estimates of wood volume in Table 8.1 include over 2 billion cubic metres on 375 000 km<sup>2</sup> of forest land reported as economically inaccessible.

### 8.1.3 Forest administration

The provinces own 90% of the forests that are not reserved for special purposes such as national parks. The federal government owns or administers about 85 million hectares, but most of this land is in Yukon and Northwest Territories and is largely unsuitable for commercial timber production. Federal ownership in the provinces is only about 800 000 ha and mostly in national parks and military reserves. Indian lands account for 2.4 million hectares.

The Constitution Act, 1867 specifies that the provinces have direct responsibility for management of their public lands and the timber and wood on them. The federal government has major or shared jurisdiction over many policies and activities related to forest resources: fiscal management, regional development, industrial efficiency, research and

development, trade and tariffs, transportation and environment. At least six federal departments have a major interest in forestry.

**Canadian forestry service.** The principal federal agency is the Canadian forestry service (CFS) of Environment Canada. Its objective is to promote the wise management and use of forest resources, through headquarters attention to forest policy and economics, and research and operational programs conducted by two national forestry institutes and six regional forest research centres. Areas of activity include: forest protection, forest management, tree improvement, forest statistics and the environmental aspects of forestry.

A government reorganization announced in January 1982 provided for the transfer of responsibility for joint federal-provincial forestry agreements from the regional economic expansion department to Environment Canada, giving the CFS a key operating role in forestry.

The Canadian forestry service underwrites about half the cost of two private research organizations. Forintek develops, processes and preserves solid wood products. The Forest Engineering Research Institute of Canada (FERIC) develops better and cheaper methods of harvesting wood.

Following the announcement of a federal unemployment insurance job creation program in March 1982, CFS initiated discussions with several provinces to develop joint agreements for the stimulation of employment among thousands of forest sector workers laid off because of the most severe weakness in wood products markets since the depression of the 1930s.

The energy, mines and resources department becomes involved in forestry through its responsibility for plans and policies relating to energy, and for the Canada Centre for Remote Sensing (CCRS). Wood and mill waste has potential for energy development, and CCRS is engaged in research on remote sensing technology, which has innumerable applications in forestry.

**Provincial forestry programs.** All provincial forest land with the exception of minor portions in national parks, federal forest experiment stations, military areas and Indian reserves (except in Newfoundland) is administered by the respective provincial governments.

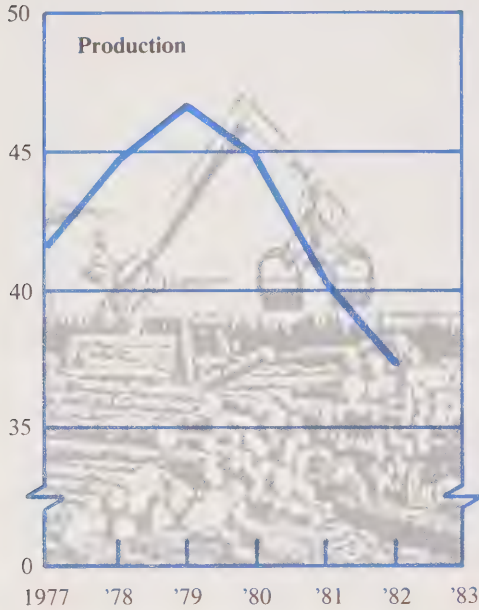
The provincial forest services have traditionally concentrated on silviculture and forest protection while the federal government tended to focus on silviculture (by way of cost-sharing agreements) and on forestry research. The private sector has concentrated on projects related to timber production, such as inventory, working plans and roads, giving less attention to forest renewal and protection.

The provincial governments now pay for most forest renewal on their Crown lands, either through direct expenditures, or payments to industry for work under tenure agreements or indirect payments.

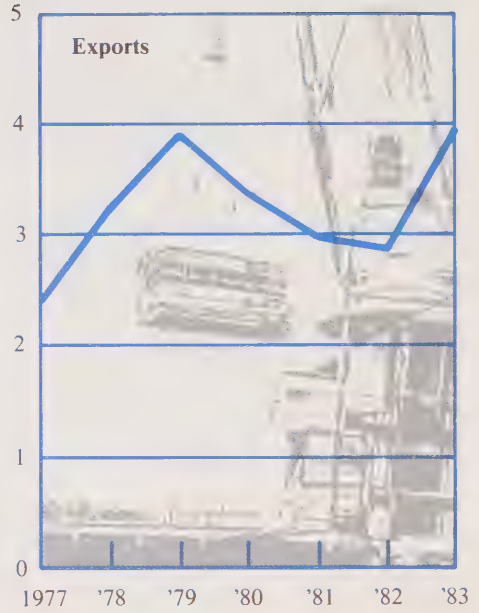
Chart 8.1

# Production and exports of lumber

Million cubic metres



Billions of dollars



The forest sector makes a valuable contribution to the economy and to specific regions of the country. With strengthened resources, this sector has the potential to provide additional employment for about 100,000 workers, one-quarter of which could be in forest renewal.

In all provinces, silviculture programs promote regeneration and improvement of the forests. In Prince Edward Island, facilities include greenhouses and an in-ground nursery capable of producing up to 10 million trees per year. In Nova Scotia a tree improvement centre designed to produce genetically improved seed for a reforestation program was established in the early 1980s. A major nursery on Cape Breton Island provides stock for a large-scale reforestation of bud worm-ravaged areas through resistant species.

Under a large-scale silviculture program in New Brunswick, a total of 30 million seedlings were planted on Crown lands in 1981. This level was to be maintained for several years.

Quebec maintains some 100 million plants in nursery stock. The Laurentian Forest Research Centre works on studies to establish regeneration on cut-over forest land. The centre also established two hardwood plantations and completed studies on the growth and survival rate of black spruce seedlings in tubes.

In Ontario, 10 nurseries produced about 76 million bare root seedlings and five facilities produced 15 million container seedlings from 1980 to 1981.

In Manitoba a tree improvement program ensures seedlings are of the highest quality. About 4 million seedlings are planted annually in reforestation of Crown lands. Forest improvement by thinning, cleaning and chemical spraying removes undesirable species and encourages growth of preferred trees.

Both Saskatchewan and Alberta conduct reforestation projects on cut-over and burned-over forest land. In Saskatchewan four tree nurseries produce 12 million seedlings annually. The Alberta Pine Ridge Forest Nursery is capable of producing 20 million seedlings a year.

Several provinces have highly developed programs for fire detection and fire fighting. Nova Scotia, for example, has 35 observation towers and an aerial patrol service with five helicopters and two fixed-wing aircraft.

Quebec's energy and resources department works through regional conservation societies for protection against fire.

In Ontario, fires are detected by aerial patrols using contracted aircraft, backed up by lookout towers in recreational areas such as Algonquin Park

and by public reports. To help fight the fires, fire bombing aircraft are used. A communication system includes a network of ground stations, radiotelephones, fireline radios, aircraft radios, telex and facsimile. A network of 125 primary weather stations supplies information to determine fire weather indexes and aids in detection patrol planning.

Manitoba also has a network of lookout towers and an aircraft detection system and ground patrols. Public education in fire prevention is carried out through radio, television, newspapers, pamphlets, signs, films and tours.

Saskatchewan has a network of 50 lookout towers and an aircraft patrol during the dry season. Helicopters and fixed-wing aircraft capable of water-dropping provide aerial support. There are also six land-based Tracker aircraft which drop long-term fire retardants.

Alberta relies on a network of 50 lookout towers and patrol aircraft during high hazard periods.

In British Columbia, forest fire prevention and suppression is vital to sustained yield management. Contracted air tankers, fire spotter aircraft and helicopters are employed during the fire season for early discovery of forest fires.

One of the biggest problems in recent years has been the spruce budworm. In Newfoundland in 1981 budworm outbreak declined from 1980, largely due to natural causes, but an epidemic infestation continued to plague areas of Nova Scotia and New Brunswick. CFS scientists provided survey information and advice to the forest industry and provincial governments. The Laurentian Forest Research Centre in Quebec carried out aerial spraying of concentrated formulas to combat spruce budworm biologically. Areas susceptible to the worm were marked and guidelines were published for predicting fir mortality caused by the budworm.

In Ontario there was a reduction in the area infested, mainly because the budworm population declined, and spraying was less prevalent than in 1980.

#### 8.1.4 Wood industries

Canada's forests provide raw materials for several large primary industries. Estimated quantities of wood cut in specific years are shown in Tables 8.4 and 8.5. Much of the output of the forest industries is exported; the sawmill industry and the pulp and paper industry contribute substantially to export trade providing a large part of the foreign exchange necessary to pay for imports.

The standard industrial classification (SIC) subdivides the wood industries group.

Primary wood industries include sawmills and planing mills, shingle mills, veneer and plywood mills and particleboard plants and use mainly roundwood as a raw material.

Secondary wood industries manufacture part of the production of primary wood industries into a

variety of products in sash, door and other millwork plants, and by manufacturers of prefabricated buildings, manufacturers of kitchen cabinets, wooden box factories, the coffin and casket industry, the wood preservation industry, the wood handles and turning industry, and miscellaneous wood industries.

**Sawmills and planing mills** produce lumber as the most important single commodity. British Columbia is the leading province. The total value of shipments in 1981 amounted to nearly \$5.0 billion. Lumber accounted for \$3.6 billion.

**Shingle mills.** Most shingles and shakes in Canada are produced by BC mills. Considerable quantities are produced by establishments classified to other industries and by individuals intermittently operating one or two shingle machines or producing shingles by hand.

**Veneer and plywood.** Hardwood veneer and plywood is produced mainly in the eastern provinces and softwood veneer and plywood almost entirely in British Columbia; Douglas fir is most commonly used because large sheets of clear veneer can be obtained from its large-diameter logs. Of the hardwoods, birch is the most important. Most raw materials are of Canadian origin but some decorative woods are imported, particularly walnut.

Softwood veneers are further manufactured into softwood plywood by Canadian mills. Some hardwood veneers are shipped to other mills in Canada for further manufacture or to the furniture industry for veneering. A significant portion is exported.

#### 8.1.5 Paper and allied industries

The standard industrial classification also subdivides the paper and allied industries group.

**The pulp and paper industry** is the most important. Part of its production is consumed in Canada or serves as raw material for paper-using or secondary paper and allied industries. A great part of it is exported, particularly newsprint and various types of pulp, most of it to the United States. Some plants included in the pulp and paper industry classification convert basic paper and paperboard into more highly manufactured papers, paper goods and boards. Their output is only a small part of Canada's total production of converted papers and boards. (Tables 8.9 - 8.11)

**Asphalt roofing manufacturers** produce composition roofing and sheathing, consisting of paper felt saturated with asphalt or tar and, in some cases, coated with a mineral surfacing. Total shipments in 1981 were valued at \$268.6 million.

**Paper box and bag industries** include manufacturers of folding cartons and set-up boxes, of corrugated boxes and of paper and plastic bags. Total shipments in 1981 amounted, respectively, to \$557.2 million, \$1,050.3 million and \$695.2 million.

**Other paper converters** produce such paper products as envelopes, waxed paper, clay-coated and enamelled paper and board, aluminum foil laminated with paper or board, paper cups and food trays, facial tissues, sanitary napkins, paper towelling and napkins and toilet tissue. Total value of manufacturing shipments of this industry in 1981 amounted to \$1,538.9 million.

## 8.2 Fisheries

After Canada extended its fishing zones to 200 nautical miles in January 1977, bilateral agreements were concluded with other countries providing for the continuation of their fisheries of stocks surplus to Canada's harvesting capacity. Negotiations were also undertaken to revise multilateral agreements which applied previously. A new international organization, the Northwest Atlantic Fisheries Organization (NAFO) was established to ensure recognition of Canada's special interest in the area beyond and immediately adjacent to the 200-mile limit on the Atlantic Coast. Canada also co-operates with other countries to conserve high seas fisheries resources in other areas, through research and international agreements. Initiatives have included a new emphasis on improving access to foreign markets to realize the full potential arising from the conservation and rational management of fish stocks.

### 8.2.1 Federal government activities

The federal government has full legislative jurisdiction over the coastal and inland fisheries of Canada. All laws for the protection, conservation and development of these fisheries resources are enacted by Parliament. Management of fisheries is conducted co-operatively with the provincial governments; some of them have been delegated certain administrative responsibilities.

The federal fisheries and oceans department controls marine and freshwater fisheries in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Yukon and Northwest Territories. The federal government inspects fish and fishery products produced for sale outside provincial boundaries throughout Canada. In the national parks, fisheries are managed by the Canadian Wildlife Service.

The fisheries and oceans department conserves, develops and generally regulates the nation's coastal and freshwater fisheries through a broad range of responsibilities: management of Canada's ocean and some inland fisheries; fisheries and oceanographic research contributing to optimum use of renewable aquatic resources and marine and fresh waters; hydrographic surveying and charting of navigable coastal and inland waters; administration of small craft harbours; environmental impact studies affecting coastal and inland waters; and research in support of international agreements relating to fisheries management and marine environmental quality.

Regional headquarters for fisheries management are in Vancouver, Winnipeg, Moncton, Halifax, and St. John's, and for ocean science and surveys at Patricia Bay, BC, Burlington, Ont., and Dartmouth, NS. There are research institutes and laboratories at centres across Canada.

Close contact with fishermen, the fishing industry and provincial authorities is maintained through the regional offices. Co-ordination and discussion between federal and provincial fisheries managers are facilitated through federal-provincial committees.

The Fisheries Prices Support Board, the Canadian Saltfish Corporation and the Freshwater Fish Marketing Corporation work closely with the department.

**International fisheries.** Many injurious effects on aquatic resources are results of historical practice, insufficient knowledge, multiple uses of water, social and economic conditions, and national and international competition. Problems under national control are corrected as conditions warrant but many resources shared with other nations must be managed jointly.

Canada co-operates with many nations to obtain scientific data and formulate policies for developing and conserving fisheries through membership in 10 international fisheries commissions and an international council. These international organizations are set up under formal conventions. Canadian representatives appointed by order-in-council include officials of the fisheries and oceans department and members of the fishing industry.

Canada is a member of the fisheries committee of the Food and Agriculture Organization of the United Nations and of the Codex Alimentarius Commission, concerned with world food quality standards.

**Acid rain** has become a matter of increasing interest and debate. Numerous studies have demonstrated that acid rain is adversely affecting many lakes and rivers. There are growing indications that it may be harming crops and forests as well. A number of strategies have been proposed. The cost and desirability of control is being debated in the United States and Canada, raising questions about the causes, effects and controllability of acid rain.

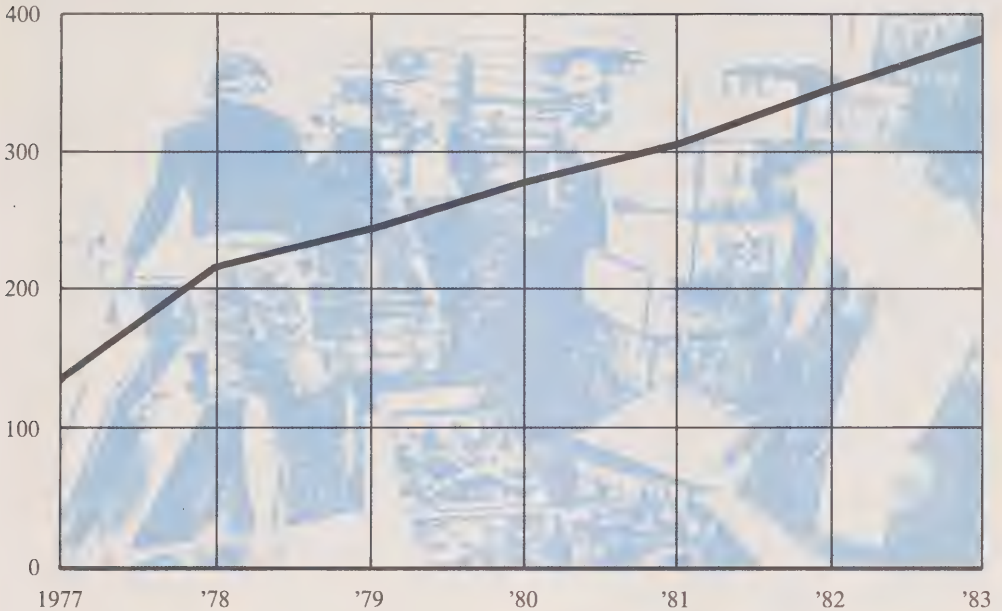
Broad dispersion of acid rain over large parts of Europe and North America represents a major man-made disturbance of the environment. Acid rain has led to severe degradation of many aquatic ecosystems in the United States, Canada, the United Kingdom, and Scandinavia. Many thousands of lakes have been affected. Waters and soils over extensive areas of North America are susceptible to acidification. There has been an increase in both acidity and toxic substances in many lakes and rivers over the past several decades, particularly in New England and southeastern Canada.

Conditions that lead to the formation and long-range transport of acid rain are reasonably well

Chart 8.2

**Exports of shellfish, fresh and frozen**

Millions of dollars



known. Sulphur dioxide and nitrogen oxides emissions are transformed in the atmosphere to sulphuric and nitric acids, transported great distances, and deposited on vegetation, soils and surface waters. In the United States and Canada the sources of acid rain are entirely man-made. There is much circumstantial evidence relating power plant emissions to acid rain.

Acid rain has destroyed many species of fish and their prey. It has also caused toxic trace metals to reach concentrations in surface and ground waters that are undesirable for human consumption. Fish taken from acid waters show high concentrations of mercury and other heavy metals. Only the control of emissions can significantly reduce the rate of deterioration of sensitive freshwater ecosystems.

**8.2.2 Provincial activities**

The fishing industry, especially the Atlantic Coast groundfish processors, experienced a severe cost-price squeeze in 1981, reflecting the weak Canadian economy and that of the trading partners. Significant operating losses, trawler tie-ups and plant closures resulted from lower prices and a flat consumer demand for some species, increased competition on foreign markets, the effect of high interest rates especially on the cost of retaining unsold inventories, and higher harvesting and processing costs.

Commercial fish landings in 1981 matched those of 1979 at 1.4 million tonnes. Landings for both these years were higher than 1980 when 1.3 million tonnes were landed.

There were 87,000 fishermen in Canada in 1980. Although Newfoundland was the province with the highest number of fishermen, just over 35,000, it had only the third highest landed value of fish at about \$161.3 million. British Columbia was second in both the number of fishermen, 18,871 and the landed value of fish at \$182.3 million. Although Nova Scotia had only around 11,000 fishermen, they produced the highest landed value of fish at \$231.6 million.

Newfoundland had by far the highest number of workers in fish processing plants with 13,117 employees in 1980. Nova Scotia was second with 7,973. In Canada as a whole there were 37,214 people employed in fish processing.

There is a close liaison between the provincial departments responsible for fisheries and the federal fisheries and oceans department. In Ontario, Manitoba, Saskatchewan and Alberta, fisheries are managed by the provincial governments. In Quebec, the provincial government manages marine and freshwater fisheries. In British Columbia, the fisheries for marine and anadromous species (fish that migrate to the sea from fresh water) are managed by the federal department,

but the provincial government manages freshwater fisheries. Licences for sport fishing are usually distributed by the provincial or territorial governments which retain revenues collected.

Provincial aid is provided for modernizing ocean-going vessels or building modern vessels capable of varied fishing operations and larger production. Fishermen can also receive help in rebuilding and repairing fishing vessels. Low-interest loans are available to build new boats or repair and convert others.

To make fishing more efficient, experiments and demonstrations on new fishing gear are conducted and potential fishing grounds are explored.

In New Brunswick, sport fishing is popular. Salmon and tuna are the primary fish caught and in 1981 a world record tuna was caught.

Research programs are carried out in both coastal and inland provinces. Prince Edward Island is establishing commercial fish culture systems designed to revitalize the oyster industry, establish mussel and trout farming, develop shellfish resources such as bay scallops and round clams and develop seaplant culture systems.

For the Quebec ocean-going fisheries, a program was under way to develop production centres, and landing points with unloading and storage facilities. For inland fishing, many species of fish are reared for restocking lakes and rivers.

Ontario conducts studies on the improvement of stocking strategies in terms of species, size, rate and time of year to increase the survival of fish and returns to the angler. Research programs are directed toward specific fisheries management problems in the Great Lakes and smaller inland waters. Quantities of hatchery reared coho and chinook salmon are released each year into the western basin of Lake Ontario. This provides good fishing during the late summer and fall.

Saskatchewan is conducting a fish culture program which involves an experimental walleye/whitefish rearing pond concept to provide fish for waters dependent on hatchery support.

The inland provinces especially make use of hatcheries to restock the lakes and rivers.

British Columbia conducts research on shellfish, principally oysters, and on marine plants.

### 8.3 The fur industry

The value of the 1980-81 Canadian production of raw furs amounted to almost \$119.4 million, made up of \$72.0 million (60%) from wildlife pelts and almost \$47.4 million (40%) from farm pelts. The value of pelts was down 10.2% from the 1979-80 level which had been a record \$132.9 million due to increased peltings and higher values for many types of pelts. Production in 1978-79 amounted to \$122.3 million.

**Fur trapping.** Prices for many kinds of Canadian wild furs had been on the increase and in 1979-80 pelt values were substantially above historic levels. The higher returns encouraged trappers to work their traplines to full advantage, resulting in increased production of many species, especially beaver, squirrel and fox (Tables 8.19 and 8.20).

**The seal hunt.** Harvesting harp seals has been a traditional component of Canada's Atlantic fishing industry for hundreds of years. The hunt is conducted from large and small vessels and by landmen operating on foot from coastal areas. It involves residents of small communities scattered along the shores of Newfoundland and Labrador, the Îles de la Madeleine, the Quebec north shore and the Arctic. The seals are harvested for their pelts as well as for meat and oil.

Both Canada and Norway have participated in the Atlantic seal hunt. Annual quotas, based on scientific assessments, are set by international agreement. The quota in 1982 was 186,000 seals of which Norway was allocated 24,000.

The Canadian government's policy on sealing considers seals a renewable natural resource available to be humanely harvested like other marine species. The hunt is conducted under the supervision of the fisheries and oceans department to ensure that killing practices are humane and quotas are observed.

On the basis of an international scientific assessment in 1982, harp seal population was estimated at approximately 2 million animals aged one year and older.

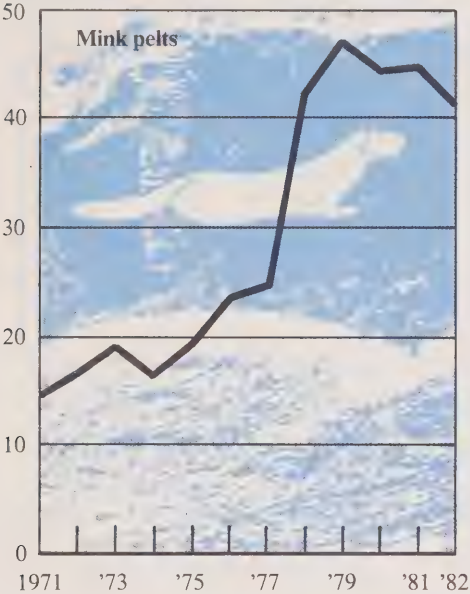
The seal hunt was worth an estimated \$10 million to the economy of Eastern Canada in 1982. Earnings received by sealers in some instances represent up to one-third of their annual income. Most sealers depend solely on fishing and fishing-related activities for their livelihood.

**Fur farming.** Mink are raised in all provinces. In 1980 the principal producers were Ontario, British Columbia, Nova Scotia and Quebec (Table 8.20).

In value of production, mink is by far the most important species raised on fur farms. Mink pelt production grew steadily from about 911,000 in 1976 to almost 1.4 million in 1981, which was an increase of 14.6% from 1980. With minor fluctuations, mink pelt production in Canada has shown an increase since 1976 following a decline after the peak year of 1967 when the output was nearly 2 million pelts. Lower returns in the face of higher production costs were responsible for this decline. Many mink farmers ceased operations and the number of mink farms decreased from 1,359 in 1967 to 395 in 1975, but has since been growing each year, rising to 679 in 1981. Average value of mink pelts reached an all-time high at \$44.08 in 1979, and total production of \$47.0 million was also a record, surpassing each of the next two years.

Chart 8.3  
**Pelts produced on fur farms**

Millions of dollars

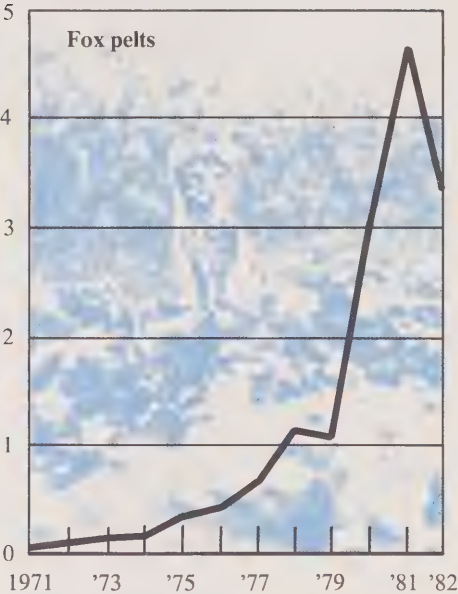


In earlier years a mink business was started by acquiring a small number of breeding animals and building up from that point. Entry into the business on a scale that would hold the promise of some return on investment within a reasonable time now involves a high outlay of capital; this is a limiting factor in attracting newcomers to the industry.

In fox farming, pelt production increased by 60.7% to 16,632 in 1981 from 10,348 in 1980. Total value of pelt production increased to \$4.6 million in 1981 from \$3 million in 1980. There were 415 fox farms across the country in 1981; the number had been increasing yearly from 39 in 1971. The increase in production continued a trend begun in the mid-1960s. Returns for ranched fox pelts rose sharply during the 1970s as the market for all long-haired furs improved. Value per pelt reached a high of \$364.42 in 1978 but declined to \$278.79 in 1981.

**Fur marketing.** The bulk of Canada's fur production is sold at public auction through five fur auction firms in Montréal, North Bay, Winnipeg, Regina and Vancouver. Furs are purchased through competitive bidding by buyers who may be purchasing for their own account or for firms in Canada or abroad. Canadian furs are usually sold in the raw or undressed state, facilitating entry into the many

Millions of dollars



countries which maintain tariffs on imports of dressed furs.

In 1980-81 exports of raw furs amounted to almost \$135.0 million, down from the 1979-80 value of \$178.6 million but up from the 1978-79 value of \$116.3 million. Imports for 1980-81 totalled almost \$152.2 million, up from the total of \$140.2 million in 1979-80 but below the \$168.2 million of furs imported in 1978-79. In 1980 exports of fur garments amounted to \$127.9 million, the highest value on record for this class of export.

The export of fur fashion garments on an important scale is a fairly new development on the Canadian fur scene. Historically, Canadian exports of furs have consisted mainly of undressed pelts from fur farms and the trapline. There are fairly definite limits to which this type of export can be developed. The production of wildlife pelts is relatively limited but showed an increase during 1979-80.

In the fur manufacturing industry no such limits apply. Other factors, however, are present, principally import tariffs and competition from fur manufacturers in the importing countries. A high degree of efficiency in design and manufacture is required by Canada to compete, and there is a growing export group among Canadian fur manufacturers which is extending the horizons of this formerly domestic industry.

## 8.4 Wildlife

Original inhabitants of what is now Canada depended on wildlife for food and clothing and some still do in remote areas. Europeans brought development of the fur trade which to a large extent guided the course of exploration and settlement. When the country was being developed, a number of mammals and birds became seriously depleted or extinct. As settlement progressed, wildlife habitat was reduced by cutting and burning forests, polluting streams, by industrial and urban development, draining wetlands and building dams.

Today the arctic and alpine tundra, a major vegetational region, has begun to show serious effects of man-made changes. The adjacent sub-arctic and sub-alpine non-commercial forests have been affected principally by human travel and an increase in the number of forest fires. Arable lands, originally forest or grassland, have completely changed but in some cases became more suitable for some forms of wildlife than the original wilderness.

Canada's varied and abundant wildlife includes most of the world's stock of woodland caribou, mountain sheep, wolves, grizzly bears and wolverines. Many factors cause fluctuations in wildlife numbers, and hunting seasons and bag limits are based to a great extent on annual population surveys and other scientific data.

Early attempts at wildlife conservation began in 1885, when Rocky Mountains Park (now Banff National Park) in Alberta was preserved in its natural state. In 1887 the continent's first bird sanctuary was started at Last Mountain Lake in Saskatchewan. In 1893 when wood bison faced extinction, laws were passed to protect them. In 1907 a nucleus herd of plains bison was established at Wainwright, Alta.

As a natural resource, wildlife in each province comes under the jurisdiction of the provincial government. The federal government is responsible for the protection and management of migratory birds and for wildlife on federal lands.

### 8.4.1 The Canadian Wildlife Service

The Canadian Wildlife Service (CWS) began as an agency to administer the Migratory Birds Convention Act (1917). It was expanded in 1947 to meet the need for scientific research in wildlife management and is now part of the environmental conservation service of Environment Canada.

CWS conducts research in the Northwest Territories and Yukon on polar and grizzly bear populations and is conducting long-term studies of caribou and muskox in co-operative programs with the NWT wildlife service.

CWS research in the national parks includes studies in limnology, ornithology, mammalogy and general ecosystem relationships. Long-term studies on wolf and grizzly bear ecology are under way. A biophysical inventory of the mountain parks is continuing in Jasper and Banff national parks. A

bison-wolf interaction study is proceeding in and around Wood Buffalo National Park. Shorter duration projects, defined each year, are undertaken for Parks Canada according to its priorities.

A convention on international trade in endangered species of wild fauna and flora was signed by Canada in July 1974, with the CWS designated the scientific and management authority for Canada. The Canada Wildlife Act (1973) provides the federal government and the CWS a legislative basis for joint federal-provincial management programs. CWS has initiated a rare and endangered species program. Continuing studies on the wood bison, whooping crane and peregrine falcon are to be augmented with new projects on other species. An international agreement on the conservation of polar bears came into effect in 1976. Canada was the first of five signatories to ratify it. As administrator of the Migratory Birds Convention Act the CWS, in consultation with provincial wildlife agencies, recommends annual revisions of the regulations on open seasons, bag limits and hunting practices. The RCMP with CWS and provincial co-operation enforces the act and regulations.

Under a national program begun by CWS, more than 40 national wildlife areas exist across Canada and more are planned. A number of co-operative wildlife areas are managed jointly with the provinces. The land, its vegetation and the wildlife it supports are the main concerns. Over 80 key nesting areas for migratory birds, many privately owned, have been declared sanctuaries under the migratory bird sanctuary regulations; in these areas hunting is prohibited.

CWS conducts surveys of waterfowl hunters to obtain estimates of species taken and the kill of migratory game birds, of the national goose harvest, of crop damage and of waterfowl populations and habitat conditions in Western Canada, and a program to reduce hazards caused by birds flying near airports. Bird-banding provides information on migration and biology of birds, and is useful in waterfowl management. CWS headquarters in Ottawa keeps continental banding records and controls activities of banders.

Attention is given to species greatly reduced in number or in danger of extinction. For example, 21 young were raised from whooping crane eggs taken from the breeding grounds and incubated at the Patuxent Wildlife Research Center in Maryland in the mid-1970s. Progeny from these chicks will be released into the wild after enough breeding birds have been developed. Sandhill cranes have served as foster parents to hatch whooping crane eggs. By 1981 the population of whooping cranes in the world had reached 122 — 97 in the wild and 25 in captivity.

Research continues on the effects of toxic chemicals on wildlife, including the effect of herbicides on wildlife habitat in Alberta, the effects

of forest sprays on song birds in New Brunswick and the relation between chemical contamination of the lower Great Lakes and the breeding success of fish-eating birds, the last under a Canada-United States Great Lakes water quality agreement. A co-operative program began with a number of Latin American countries to monitor and improve the wintering habitat of migratory birds.

Studies continued on the health of game, fur-bearing animals and rodents in Northern Canada and parasitism in these mammals and in birds. Measures were taken to control and monitor anthrax among bison in Wood Buffalo National Park and in the Northwest Territories.

Under a wildlife interpretation program, the CWS operates five centres across Canada. Wye Marsh wildlife interpretation centre at Midland, Ont. interprets the northern hardwood biotic region. In Quebec, a centre at Cap Tourmente focuses on the habitat of the greater snow geese and one at Percé on the natural and human history of the Atlantic gulf coast. A prairie wildlife interpretation centre near Swift Current, Sask. focuses on the prairie grassland biotic region and a Creston Valley, BC, wildlife interpretation centre highlights the Columbia biotic region.

#### 8.4.2 Provincial wildlife

A major function of provincial wildlife management is to protect wildlife from endangerment or extinction and to preserve the wildlife habitat, to maintain wildlife populations at optimal levels and to foster best use of the habitat by appropriate species. Provincial authorities promote public attitudes consistent with wildlife resources and management protection strategies, and regulate the use of wildlife by setting limits and closed seasons for hunting and fishing.

Annual inventories are taken by the provinces to monitor the population of game and non-game species. Education programs for hunters, trappers and fishermen encourage the wise use of resources. Limits are set on fishing and hunting to protect fish and game.

In Newfoundland, wildlife populations include moose and caribou, ptarmigan, ruffed grouse and snowshoe hare. Beaver are the only trapped species for which there is an active management program. Studies are under way on pine marten and arctic hare.

In Prince Edward Island a new species of pheasant has been introduced, beaver have been moved to vacant habitat, and ducks are banded to study the effects of hunting.

Nova Scotia wetlands management is conducted in co-operation with Ducks Unlimited (Canada) and biological assessment is made of lakes and streams.

In New Brunswick, principal game species are: deer, bear, moose, grouse, waterfowl and muskrat. Trappers take about \$1 million worth of furbearers

annually: beaver, fox, bobcat, muskrat and others. Angling is popular, particularly for salmon, trout and bass.

Objectives of wildlife management in Quebec are to maintain and improve wildlife through ecological balance and sound management of public hunting, fishing and trapping grounds. Research is carried out on the dynamics and habitats of the various species of wildlife, and citizen participation is encouraged in the conservation of wildlife and its environment.

In central and northwestern Ontario the deer herd has declined and is now below the carrying capacity of the range. New initiatives in deer management include: increased control of the harvest; predator control; and long-range habitat planning to increase herd size and hunting. The major effort in fur management is directed toward beaver, with aerial censuses of beaver colonies and specimen collections by trappers. The harvest of beaver, marten, fisher and lynx is controlled by quota.

In Manitoba a licence draw system is used for allocating moose, elk, woodland caribou and wild turkey hunting opportunity. A special landowner elk hunt is an incentive for landowners to retain wildlife habitat. Manitoba's commitment to humane trapping was underscored in trapper education programs and the distribution of over 10,000 humane devices to trappers free of charge. A new Wildlife Act proclaimed by the Manitoba legislature in 1980 makes it an offence to hunt or trap on private land without the permission of the landowner or lawful occupant.

In Saskatchewan, emphasis is being placed on providing supplementary feeding and shelter to winter wildlife, redirecting hunting pressure from less abundant game species to more abundant ones and improvement of habitat for about 450 species of wildlife.

Wildlife in Alberta includes ungulates, waterfowl and upland birds such as pheasant, Hungarian partridge, ptarmigan and ruffed, spruce, blue, sage and sharp-tailed grouse, as well as species of big game and furbearers.

The diverse wildlife in British Columbia includes deer, black bear, wolf, coyote, raccoon, caribou, cougar, mountain sheep, mountain goat, grizzly bear, skunk, fox, wolverine, lynx and bobcat. Ducks and snow geese are among the game birds. Rare and endangered species which may not be killed at any time are Vancouver Island marmot, sea otter, white pelican and burrowing owl. Protected species are yellow badger, mountain cottontail and white-tailed jack-rabbit.

#### 8.4.3 Territorial wildlife

In Yukon judicious use of big-game species, upland game birds and sport fish is promoted for residents and non-residents. The Yukon wildlife branch licenses and regulates trapping of fur-bearing animals and activities of outfitters and guides. To increase

knowledge about wildlife species and provide the basis for management, it conducts and supports biological research and public educational programs.

**Northwest Territories.** The NWT wildlife service provides opportunities for native peoples to follow their traditional pursuits of hunting, trapping and fishing. Included are trappers' incentive grants (a fur subsidy program based on a percentage of the season's harvest), fur marketing service, and an outpost camp program to help groups who wish to move back to the land and live off the natural resources available through hunting and trapping.

Wildlife management is carried out mainly by control and monitoring of harvest. Quotas are allocated by management zones. Studies are conducted primarily to determine the abundance, productivity and seasonal distribution of large mammals, including the polar bear.

The wildlife service is responsible for administration of sports fishing licences. Under permit from the federal fisheries and marine service, fish and wildlife officers monitor commercial fisheries and the testing of lakes and rivers to determine the viability of commercial operations to supply local domestic markets.

### Sources

- 8.1 - 8.1.2 Information Services, Canadian Forestry Service, Department of the Environment.
- 8.1.3 Information Services, Canadian Forestry Service, Department of the Environment; provincial government departments.
- 8.1.4 - 8.1.5 Manufacturing and Primary Industries Division, Statistics Canada.
- 8.2 - 8.2.1 Communications Directorate, Department of Fisheries and Oceans.
- 8.2.2 The respective provincial government departments.
- 8.3 Agriculture Statistics Division, Statistics Canada; Communications Directorate, Department of Fisheries and Oceans.
- 8.4 - 8.4.1 Information Directorate, Department of the Environment.
- 8.4.2 The respective provincial government departments.
- 8.4.3 The respective territorial government departments.

### Selected references

- Annual report 1981-1982.* Environment Canada, Ottawa, 1983.
- Annual report 1980-1981.* Department of Fisheries and Oceans, Ottawa, 1982; *Annual report 1982-1983.* Department of Fisheries and Oceans, Ottawa, 1984.
- Annual report 1982-83.* Fisheries Prices Support Board Canada, Department of Fisheries and Oceans, Ottawa, 1983.
- Canada's forest inventory, 1981.* Environment Canada, Ottawa, 1982.
- Canadian fisheries, annual statistical review, 1981.* Department of Fisheries and Oceans, Ottawa, 1983.
- Canadian forestry statistics, 1981.* Statistics Canada 25-202, Ottawa, 1983.
- Fur production, 1982.* Statistics Canada 23-207, Ottawa, 1983.
- Policy statement, a framework for forest renewal.* Environment Canada, Ottawa, 1982.
- Report on fur farms, 1981.* Statistics Canada 23-208, Ottawa, 1982.

TABLES

.. not available  
 ... not appropriate or not applicable  
 — nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

8.1 Canada's forest inventory, 1981

Province or territory	Forest land '000 km <sup>2</sup>		Production forest land tenure '000 km <sup>2</sup>			Volume <sup>3</sup> '000 000 m <sup>3</sup>		
	Total <sup>1</sup>	Production <sup>2</sup>	Crown provincial	Crown federal	Privately owned and other	Soft-woods	Hard-woods	Total
Newfoundland	142	83	78	--	5	429	34	463
Prince Edward Island	3	3	--	--	3	22	11	33
Nova Scotia	41	29	6	--	23	137	66	203
New Brunswick	65	62	29	--	33	338	178	516
Quebec	940	849	784	1	64	3 089 <sup>4</sup>	1 044 <sup>4</sup>	4 133 <sup>4</sup>
Ontario	807	417	374	4	39	2 075 <sup>4</sup>	1 123 <sup>4</sup>	3 198 <sup>4</sup>
Manitoba	349	136	130	1	5	439 <sup>4</sup>	196 <sup>4</sup>	635 <sup>4</sup>
Saskatchewan	178	79	77	2	--	293 <sup>4</sup>	191 <sup>4</sup>	484 <sup>4</sup>
Alberta	349	217	216	1	--	781 <sup>4</sup>	657 <sup>4</sup>	1 438 <sup>4</sup>
British Columbia	633	508	482	2	24	7 438 <sup>4</sup>	404 <sup>4</sup>	7 842 <sup>4</sup>
Yukon	242	67	—	67	--	215	40	255
Northwest Territories	615	138	—	138	--	315	131	446
Canada	4 364	2 588	2 176	216	196	15 571 <sup>4</sup>	4 075 <sup>4</sup>	19 646 <sup>4</sup>

<sup>1</sup>Land primarily intended for growing, or currently supporting, forest.  
<sup>2</sup>Productive forest land available for growing and harvesting forest crops. Excludes reserved forest land by law not available, as in national parks, some provincial parks, game refuges, water conservation areas, nature preserves and military areas.  
<sup>3</sup>Merchantable volume on production forest land.  
<sup>4</sup>Applies to inventoried portion only.

8.2 Forest utilization, 10-year average, 1972-1981

Item	Usable wood '000 m <sup>3</sup>	Percentage of total utilization
Products utilized		
Logs and bolts <sup>1</sup>		
Domestic use	96 311	67.6
Exported	691	0.5
Pulpwood		
Domestic use	38 995	27.4
Exported	1 015	0.7
Fuelwood (incl. wood for charcoal)	4 050	2.9
Other products	1 328	0.9
Total utilization	142 390	100.0

<sup>1</sup>Includes some wood used in pulp manufacture.

8.3 Forest fire losses

Province or territory	1978		1979		1980	
	Fires No.	Area burned ha	Fires No.	Area burned ha	Fires No.	Area burned ha
Newfoundland	209	4 681	172	32 418	60	953
Prince Edward Island	3	--	105	3	1	65
Nova Scotia	793	739	682	755	373	878
New Brunswick	839	2 636	409	1 407	389	3 012
Quebec	1,198	6 503	615	3 199	860	13 092
Ontario	940	7 524	1,564	63 714	1,778	560 323
Manitoba	379	24 609	644	82 425	1,078	603 706
Saskatchewan	348	92 662	413	229 669	743	1 495 593
Alberta	653	7 791	1,000	194 605	1,338	639 724
British Columbia	2,308	50 082	3,849	29 444	1,763	49 927
Yukon	102	7 394	65	7 347	150	106 905
Northwest Territories	156	79 024	380	1 989 134	345	1 214 396
Other federal lands	100	5 299	165	66 628	97	305 024
Total	8,028	288 944	10,063	2 700 748	8,973	4 993 598

### 8.4 Volume of wood cut, by province (thousand cubic metres)

Province or territory	1977 <sup>1</sup>	1978	1979	1980	1981
Newfoundland	2 195	2 288	2 481	2 795	2 568
Prince Edward Island	139	159	223	278	333
Nova Scotia	3 676	4 157	4 389	4 544	3 986
New Brunswick	7 702	8 509	8 750	8 387	7 795
Quebec	31 063	34 079	35 736	31 687	34 234
Ontario	19 270	20 187	21 294	21 322	22 808
Manitoba	1 784	1 803	1 903	2 335	1 803
Saskatchewan	2 959	2 863	3 579	3 330	3 555
Alberta	5 890	5 726	6 208	5 933	6 586
British Columbia	69 970	75 164	76 195	74 654	60 780
Yukon and Northwest Territories	133	167	212	115	124
Canada	144 781	155 102	160 970	155 380	144 572

### 8.5 Volume of wood cut, by type of product (thousand cubic metres)

Type of product	1977 <sup>1</sup>	1978	1979	1980	1981
Logs and bolts	103 708	111 536	114 433	109 957	96 318
Pulpwood	36 252	38 039	40 242	38 783	41 204
Fuelwood	3 681	4 183	4 506	4 731	5 488
Poles and piling	2	2	2	2	2
Round mining timber	2	2	2	2	2
Fence posts	2	2	2	2	2
Miscellaneous roundwood	1 140	1 344	1 789	1 909	1 562
Total	144 781	155 102	161 970	155 380	144 572

<sup>1</sup>Included with logs and bolts.

<sup>2</sup>Included with miscellaneous roundwood.

### 8.6 Lumber production, shipments and value of all shipments of the sawmill and planing mill industry, by province<sup>1</sup>

Year and province or territory	Lumber			Value of shipments <sup>1</sup> of goods of own manufacture \$'000
	Production <sup>2</sup> m <sup>3</sup>	Quantity shipped <sup>1</sup> m <sup>3</sup>	Value of shipments <sup>1</sup> \$'000	
1978	3	3	3	3
Newfoundland	—	—	—	—
Prince Edward Island	—	—	—	—
Nova Scotia	355 551	340 076	32,971	44,133
New Brunswick	877 393	888 273	74,642	112,379
Quebec	6 907 377	7 450 527	580,753	761,602
Ontario	3 059 550	2 852 785	273,090	396,084
Manitoba	479 112	472 448	39,484	45,592
Saskatchewan	1 220 767	1 466 468	121,209	147,117
Alberta	27 889 172	28 300 512	2,723,919	3,152
British Columbia	—	—	—	—
Yukon and Northwest Territories	3	3	3	3
Canada	40 993 318	41 980 368	3,863,495	4,693,644
1979	—	—	—	—
Newfoundland	20 225	21 018	2,248	5,942
Prince Edward Island	3	3	3	3
Nova Scotia	365 691	336 704	37,297	49,138
New Brunswick	1 007 789	1 039 556	99,644	148,179
Quebec	7 608 811	7 717 751	694,759	945,537
Ontario	3 593 594	3 301 635	343,237	495,612
Manitoba	222 252	227 977	23,678	36,084
Saskatchewan	434 399	449 648	38,741	45,324
Alberta	1 326 646	1 546 569	136,306	168,461
British Columbia	28 245 840	28 282 923	3,289,226	3,778,219
Yukon and Northwest Territories	3	3	3	3
Canada	42 852 286	42 948 110	4,667,348	5,676,034

### 8.6 Lumber production, shipments and value of all shipments of the sawmill and planing mill industry, by province<sup>1</sup> (concluded)

Year and province or territory	Lumber			Value of shipments <sup>2</sup> of goods of own manufacture \$'000
	Production m <sup>3</sup>	Quantity shipped <sup>1</sup> m <sup>3</sup>	Value of shipments <sup>2</sup> \$'000	
1980				
Newfoundland	11 110 <sub>3</sub>	12 190 <sub>3</sub>	1,299 <sub>3</sub>	4,306 <sub>3</sub>
Prince Edward Island				
Nova Scotia	330 004	265 768	32,606	46,707
New Brunswick	1 169 620	987 807	98,367	156,962
Quebec	7 398 651	7 382 508	642,330	926,534
Ontario	3 537 694	3 198 652	310,055	480,955
Manitoba	214 852 <sub>3</sub>	214 679 <sub>3</sub>	18,678 <sub>3</sub>	30,646 <sub>3</sub>
Saskatchewan				
Alberta	1 482 394	1 518 949	111,789	145,817
British Columbia	27 001 817	26 398 994	2,761,638	3,448,329
Yukon and Northwest Territories	3	3	3	3
Canada	41 528 622	40 347 654	4,004,814	5,278,010
1981				
Newfoundland	— <sub>3</sub>	— <sub>3</sub>	— <sub>3</sub>	3 <sub>3</sub>
Prince Edward Island				
Nova Scotia	297 275	260 567	31,869	48,048
New Brunswick	851 870	933 972	89,611	156,632
Quebec	6 724 819	7 245 424	615,681	966,199
Ontario	3 547 817	3 425 213	338,891	521,359
Manitoba	231 570	214 564	17,870	29,882
Saskatchewan	420 106	422 775	32,252	38,614
Alberta	1 828 433	1 783 456	130,554	170,678
British Columbia	24 435 013	24 867 340	2,363,925	3,031,236
Yukon and Northwest Territories	3	3	3	3
Canada	38 368 879	39 179 934	3,623,359	4,972,734

<sup>1</sup>Quantity figures are from establishments reporting on detailed forms only.

<sup>2</sup>Shipment figures contain some duplication because sales of lumber from one sawmill to another are reported as shipments by both establishments.

<sup>3</sup>Confidential.

### 8.7 Lumber shipments<sup>1</sup> of the sawmill and planing mill industry, by species

Kind of wood	1978		1979	
	Quantity m <sup>3</sup>	Value \$'000	Quantity m <sup>3</sup>	Value \$'000
Spruce and balsam fir	22 193 574	1,839,407	23 392 781	2,178,287
Douglas fir	3 280 884	319,451	3 534 600	437,226
Hemlock	7 093 152	663,221	6 370 679	777,220
Cedar (red and white)	2 709 094	436,362	2 564 289	541,764
White and red pine	745 738	87,614	691 863	99,458
Jack pine and lodgepole pine	4 818 684	394,132	5 168 645	468,056
Maple	342 799	36,477	407 314	51,168
Yellow birch	230 582	25,283	196 521	25,924
Other	565 859	61,548	621 418	88,244
Total	41 980 368	3,863,495	42 948 110	4,667,347
1980			1981	
	Quantity m <sup>3</sup>	Value \$'000	Quantity m <sup>3</sup>	Value \$'000
Spruce and balsam fir	22 289 118	1,889,435	22 139 269	1,787,120
Douglas fir	2 911 625	322,237	2 579 664	263,638
Hemlock	6 033 862	741,938	5 091 196	532,027
Cedar (red and white)	2 593 889	419,944	2 721 968	411,684
White and red pine	617 859	89,794	631 631	93,174
Jack pine and lodgepole pine	4 743 562	382,558	4 758 792	358,875

### 8.7 Lumber shipments<sup>1</sup> of the sawmill and planing mill industry, by species (concluded)

Kind of wood	1980		1981	
	Quantity m <sup>3</sup>	Value \$'000	Quantity m <sup>3</sup>	Value \$'000
Maple	330 769	42,771	307 471	42,229
Yellow birch	171 980	24,179	159 332	21,852
Other	654 980	91,959	790 610	112,761
Total	40 347 645	4,004,814	39 179 933	3,623,360

<sup>1</sup>See footnote 1, Table 8.6.

### 8.8 Veneer and plywood shipments<sup>1</sup>, by type, all industries

Type	1978		1979	
	Quantity m <sup>3</sup>	Value \$'000	Quantity m <sup>3</sup>	Value \$'000
Veneer				
Softwoods	678 174	60,817	633 752 <sub>2</sub>	64,353 <sub>2</sub>
Hardwoods	164 351	78,500		
Softwood plywood	2 575 891	536,552	2 379 157 <sub>2</sub>	545,302 <sub>2</sub>
Hardwood plywood	217 409	81,845		
	1980		1981	
	Quantity m <sup>3</sup>	Value \$'000	Quantity m <sup>3</sup>	Value \$'000
Veneer				
Softwoods	493 043 <sub>2</sub>	51,968 <sub>2</sub>	616 339 <sub>2</sub>	67,376 <sub>2</sub>
Hardwoods				
Softwood plywood	2 242 685 <sub>2</sub>	492,215 <sub>2</sub>	1 977 871	491,934
Hardwood plywood			197 325	90,740

<sup>1</sup>Quantity figures are from establishments reporting on detailed forms only.

<sup>2</sup>Confidential.

### 8.9 Pulp shipments and production

Item	1978	1979	1980	1981
Mill shipments of pulp <sup>1</sup>	'000 t 8 021	8 089	8 165	7 836
	\$'000 2,461,919	3,287,581	4,140,647	4,005,492
Groundwood pulp	'000 t 316	359	325	327
	\$'000 56,649	84,480	88,862	86,806
Chemical pulps	'000 t 7 705	7 730	7 840	7 509
	\$'000 2,405,270	3,203,101	4,051,785	3,918,686
Pulp production <sup>2</sup>	'000 t 20 152	20 728	20 687	20 572
Quebec	" 6 631	6 869	6 356	6 858
Ontario	" 4 127	4 322	4 368	4 394
British Columbia	" 5 426	5 523	5 783	4 995
Other provinces <sup>3</sup>	" 3 968	4 014	4 180	4 325

<sup>1</sup>Includes screenings.

<sup>2</sup>The differences between these figures and the quantities of mill shipments represent the amounts of pulp further manufactured by the reporting companies.

<sup>3</sup>Prince Edward Island is the only province in which there is no production.

### 8.10 Shipments of basic paper and paperboard, by type and province

Type and province	1978	1979	1980	1981
TYPE				
Newsprint paper	'000 t 8 773	8 667	8 419	8 836
	\$'000 3,003,886	3,336,149	3,722,794	4,385,980
Book and writing paper	'000 t 1 352	1 572	1 617	1 582
	\$'000 729,202	973,817	1,133,253	1,205,059

## 8.10 Shipments of basic paper and paperboard, by type and province (concluded)

Type and province		1978	1979	1980	1981
Wrapping paper	'000 t	620	588	521	516
	\$'000	252,117	293,156	301,648	327,233
Paperboard	'000 t	2 145	2 208	2 267	2 305
	\$'000	615,027	733,821	856,294	959,353
All other papers	'000 t	277	298	316	280
	\$'000	129,404	153,663	191,500	187,871
Total					
	'000 t	13 167	13 333	13 140	13 519
	\$'000	4,729,638	5,490,606	6,205,489	7,065,496
PROVINCE					
Quebec	'000 t	5 829	5 909	5 495	6 036
	\$'000	2,117,794	2,437,386	2,669,023	3,215,570
Ontario	'000 t	3 220	3 432	3 406	3 442
	\$'000	1,246,399	1,546,387	1,713,165	1,915,377
British Columbia	'000 t	2 150	2 145	2 147	1 931
	\$'000	694,165	800,018	930,424	905,048
Other provinces <sup>1</sup>	'000 t	1 968	1 847	2 092	2 110
	\$'000	671,279	706,815	892,876	1,029,501

<sup>1</sup>Prince Edward Island is the only province in which there is no production.

## 8.11 Exports of pulp and newsprint to Britain, United States and all countries

Commodity and year	Britain		United States		All countries	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
Pulp						
1977	438 159 <sup>f</sup>	155,409	3 343 341 <sup>f</sup>	1,218,689	6 091 929 <sup>f</sup>	2,156,028
1978	408 182 <sup>f</sup>	128,611	3 440 780 <sup>f</sup>	1,175,954	6 637 592 <sup>f</sup>	2,179,270
1979	388 907	165,433	3 731 595	1,669,181	7 090 412	3,077,846
1980	377 944	205,773	3 515 798	1,911,688	7 244 311	3,866,989
1981	306 221	176,113	3 479 527	1,987,636	6 751 976	3,820,334
1982	275 209	144,339	3 110 184	1,699,966	6 122 580	3,233,715
Newsprint						
1977	430 259	154,257	5 748 532	1,869,417	7 265 731	2,381,265
1978	419 437	176,894	6 404 979	2,333,814	7 868 346	2,886,214
1979	398 591	196,680	6 347 844	2,608,062	7 777 999	3,221,678
1980	433 593	250,930	6 209 403	2,924,483	7 706 840	3,676,468
1981	554 345	351,716	6 165 939	3,304,165	7 986 785	4,326,185
1982	551 229	350,291	5 580 277	3,214,399	7 077 975	4,080,369

## 8.12 Imports and exports of fish products

Product group	Imports				Exports			
	1980		1981		1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
Seafish, whole or dressed, fresh	27 161	28,932	24 634	32,560	20 737	24,984	28 704	32,251
Freshwater fish, whole or dressed, fresh	599	1,123	913	2,024	8 680	19,799	9 170	18,606
Seafish, whole or dressed, frozen	21 277	43,371	18 746	42,066	67 598	176,540	84 402	204,580
Freshwater fish, whole or dressed, frozen	1 720	3,536	841	2,907	12 679	17,416	14 471	21,877
Seafish fillets, fresh	1 308	2,013	980	2,075	5 841	17,308	7 522	23,916
Freshwater fish fillets, fresh	322	646	172	398	1 182	6,037	896	6,292
Seafish fillets, frozen	2 202	6,493	1 971	7,519	91 564	219,183	105 089	273,762
Freshwater fish fillets, frozen	488	1,792	476	1,763	2 770	16,506	3 778	27,527
Seafish blocks, frozen	4 865	12,229	4 078	10,665	60 929	143,851	53 030	125,794
Freshwater fish blocks, frozen	66	209	39	104	2 647	4,168	1 878	3,462
Seafish steaks, sticks and portions, frozen	142	901	208	1,320	...	...	...	...
Freshwater fish steaks, sticks and portions, frozen	13	32	2	6	...	...	...	...

## 8.12 Imports and exports of fish products (concluded)

Product group	Imports				Exports			
	1980		1981		1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
Smoked fish	175	726	173	680	4 301	9,642	5 860	11,464
Salted or dried fish	1 033	3,554	1 348	3,821	40 388	99,538	51 588	140,004
Pickled and cured fish	153	202	506	568	24 080	29,794	22 825	28,018
Canned fish <sup>1</sup>	15 732	79,528	14 799	70,448	21 329	100,081	26 570	139,864
Shellfish, fresh or frozen	17 622	130,835	20 669	143,680	63 375	278,333	45 499	302,777
Canned shellfish	5 604	33,690	5 626	32,684	2 786	24,196	3 215	25,248
Fish roe	736	1,393	296	888	4 798	51,897	7 622	93,851
Fish meal	323	80	1 807	522	30 369	14,722	32 370	17,582
Fish oil	529	968	431	791	8 569	4,576	9 050	4,353
Miscellaneous fishery products <sup>2</sup>	27 780	7,144	32 854	7,935	23 966	16,359	18 147	17,408
Total	129 850	359,397	131 569	364,424	498 588	1,274,930	531,886	1,518,636

<sup>1</sup>Import quantities exclude canned anchovies and sardines which are reported in number of boxes.

<sup>2</sup>Export quantities exclude seal skins which are reported in number of skins.

## 8.13 Products and marketed values of fish, 1980

Species	Atlantic <sup>P</sup>		Pacific		Canada <sup>P</sup>	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
SEAFISH						
Fresh and frozen, whole or dressed	70 480	67,225	38 478	147 360	108 958	214,585
Halibut	1 218	5,125	2 997	11,358	4 215	16,483
Herring	20 852	9,519	9 142	8,265	29 994	17,784
Mackerel	10 041	3,965	—	—	10 041	3,965
Salmon	1 828	11,231	21 136	119,728	22 964	130,959
Fresh and frozen fillets and blocks	197 770	444,064	6 998	20,552	204 768	464,616
Cod	81 808	199,476	2 010	5,578	83 818	205,054
Haddock	15 674	45,831	—	—	15 674	45,831
Redfish	12 917	27,837	2 703	7,068	15 620	34,905
Pollock	8 682	15,105	—	—	8 909	15,668
Flounder and sole	25 228	84,909	1305	5,668	26 533	90,577
Herring	36 779	39,033	36	43	36 815	39,076
Smoked	3 896	8,399	663	5,353	4 559	13,752
Herring bloaters	—	—	—	—	—	—
Salmon	13	218	482	4,651	495	4,869
Salted	51 309	123,992	—	—	51 309	123,992
Cod	42 242	103,873	—	—	42 242	103,873
Cured or pickled	18 696	27,444	252	1,355	18 948	28,799
Herring	16 634	25,742	218	1,033	16 852	26,775
Canned	21 136	76,012	24 270	146,883	45 406	222,895
Herring and sardines	12 068	42,739	—	—	12 068	42,739
Salmon	15	119	24 260	146,827	24 275	146,946
Meal and oil	60 701	27,929	5 660	2,830	66 361	30,759
Groundfish	45 800	20,109	—	—	45 800	20,109
Herring	13 528	7,197	3 067	1,544	16 595	8,741
Oil <sup>2</sup>	13 064	5,059	784	245	13 848	5,304
Groundfish	4 281	1,590	—	—	4 281	1,590
Herring	—	—	—	—	—	—
Roe	1 043	1,913	3 866	48,748	4 909	50,661
Herring	600	901	2 125	35,522	2 725	36,423
Other seafish products	30 410	38,393	16 811	15,321	47 221	53,714
SHELLFISH						
Fresh and frozen, in shell	29 635	104,199	2 998	7,109	32 633	111,308
Squid	7 158	5,159	—	—	—	—
Lobsters	13 429	82,157	—	—	13 429	82,157
Crabs	2 528	4,840	790	2,585	3 318	7,425
Fresh and frozen, shucked	22 968	175,603	1 115	5,948	24 083	181,551
Scallops	8 714	98,438	—	—	8 714	98,438
Squid	—	—	—	—	—	—
Lobsters	1 526	24,506	—	—	1 526	24,506
Shrimps	1 820	15,948	20	250	1 840	16,198
Crab	3 388	28,951	243	1,624	3 631	30,575
Canned	3 644	38,229	515	852	4 159	39,081
Clams	860	1,716	510	779	1 370	2,495
Lobsters	420	6,424	—	—	420	6,424
Crabs	2 360	30,026	—	—	—	—
Other shellfish products	11 125	13,877	329	1,385	11 454	15,262

8.13 Products and marketed values of fish, 1980 (concluded)

Species	Atlantic <sup>D</sup>		Pacific		Canada <sup>D</sup>	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
Miscellaneous products <sup>2</sup>	44	5,043	—	—	44	5,043
Total, sea fisheries	535 921	1,157,381	102 739	403,941	638 660	1,561,322
Inland fisheries	...	...	...	...	43 000	90,117
TOTAL	...	...	...	...	681 660	1,651,439

<sup>1</sup>Confidential.  
<sup>2</sup>Includes seal oil.  
<sup>3</sup>Quantity excludes number of seals.

8.14 Landings of sea and inland fish and other sea products

Province or territory	1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000
Newfoundland	499 199	161,286	495 261	167,662
Prince Edward Island	33 463	26,772	38 515	31,786
Nova Scotia	436 822	231,572	467 473	264,124
New Brunswick	105 932	48,752	103 651	55,003
Quebec	81 916	43,209	87 591	46,790
Ontario	26 701	23,644	28 071	31,767
Manitoba	18 086	16,591	...	...
Saskatchewan	5 336	3,794	...	...
Alberta	1 213	1,014	...	...
British Columbia <sup>1</sup>	129 926	182,281	160 942	233,747
Yukon and Northwest Territories	1 717	1,793	...	...
Canada	1 340 311	740,708	1 402 039 <sup>e</sup>	846,695 <sup>e</sup>
Seafish	1 286 014	692,356	1 352 039	798,695
Inland fish	54 297	48,352	50 000 <sup>e</sup>	48,000 <sup>e</sup>

Quantity includes fish and shellfish only. Value also includes marine plants, aquatic mammals and livers.  
<sup>1</sup>Includes halibut landed in United States ports.

8.15 Landings of the chief commercial fish

Area and species	1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000
ATLANTIC COAST				
Groundfish	739 784	240,959	778 736	263,734
Catfish	4 993	1,071	5 392	1,108
Cod	422 092	142,876	439 433	162,809
Flounder and sole	104 887	29,591	105 341	29,077
Haddock	54 262	26,474	57 024	24,741
Hake	18 269	4,352	19 554	4,698
Halibut	2 168	4,949	1 932	4,659
Pollock	36 751	9,191	1 932	4,759
Redfish	48 982	9,973	72 066	14,254
Turbot	39 567	10,057	27 300	7,632
Other	7 813	2,425	10 076	3,626
Pelagic and estuarial	241 941	71,687	224 012	50,744
Alewives	9 738	2,482	5 601	860
Herring <sup>1</sup>	176 915	42,668	161 442	27,048
Mackerel	22 136	4,838	19 296	3,941
Salmon	2 391	8,264	2 154	8,061
Smelts	2 291	815	2 152	813
Swordfish	1 885	4,170	577	1,236
Other	26 585	7,750	32 800	8,765
Molluscs and crustaceans	174 363	189,256	188 349	241,604
Clams	4 254	2,340	4 722	2,846
Lobsters	20 088	80,012	21 697	93,348
Oysters	1 514	1,444	1 403	1,524
Scallops	70 472	68,496	89 896	99,604
Squid	34 848	3,439	18 318	2,788

8.15 Landings of the chief commercial fish (continued)

Area and species	1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000
Crabs	29 386	16,834	38 238	21,881
Shrimp	13 317	16,505	13 628	19,320
Other	484	186	447	183
Other items	—	8,173	—	8,866
Total, Atlantic Coast	1 156 088	510,075	1 191 087	564,948
PACIFIC COAST				
Groundfish	35 023	23,299	37 602	25,355
Gray cod	7 817	3,326	6 450	2,794
Ling cod	1 934	1,191	2 437	1,671
Black cod	2 849	3,569	3 802	6,336
Rockfish (Redfish)	9 669	3,102	9 460	3,137
Halibut	4 396	9,093	3 266	7,246
Sole	4 668	2,301	4 347	2,218
Flounder	119	27	208	45
Turbot	1 392	254	944	170
Pollock	2 179	436	1 130	242
Hake	—	—	5 558	1,496
Pelagic and estuarial	86 025	145,650	120 122	197,003
Herring	25 155	27,016	38 149	38,105
Tuna	212	345	103	258
Salmon				
Spring	6 540	24,307	5 916	25,731
Sockeye	7 727	18,222	21 000	54,577
Coho	9 025	23,078	7 514	22,009
Pink	13 718	15,117	38 253	45,822
Chum	16 809	36,198	6 157	9,781
Steelhead	52	81	81	147
Skate	1 016	63	960	64
Smelts	1	2	1	2
Dogfish	4 545	843	1 091	205
Other	1 225	378	897	302
Molluscs and crustaceans	8 878	10,797	8 347	11,145
Clams	4 568	3,390	3 568	2,942
Oysters	1 798	1,134	2 409	1,437
Abalone	97	601	85	794
Shrimp and prawns	656	2,701	939	2,972
Crabs	1 701	2,865	1 317	2,944
Other	58	106	29	56
Other items	—	2,535	—	3,205
Herring roe	168	2,232	189	3,045
Salmon roe	49	146	54	159
Non-food fish	260	13	39	1
Sea urchin	334	84	—	—
Other	72	60	—	—
Total, Pacific Coast	129 926	182,281	166 071	236,708
INLAND				
Tomcod	80	50	50	30
Alewives	522	80	1 338	308
Eel	361	1,063	344	816
Salmon	16	34	44	113
Shad	17	13	15	10
Smelts	11 426	2,499	13 901	3,323
White bass	911	938	893	1,330
Sturgeon	130	394	120	359
Whitefish	10 263	9,533	8 275	8,056
Catfish	476	402	508	477
Burbot	109	21	181	8
Tullibee <sup>2</sup>	2 325	2,240	2 248	2,086
Lake trout	1 214	1,140	860	947
Rainbow trout	—	—	—	—
Pickereel (yellow)	5 533	13,340	6 214	16,978
Pike	4 301	2,490	3 742	2,407
Perch	6 526	9,009	5 042	14,902
Carp	1 522	331	1 284	300
Sucker (mullet)	5 543	941	1 664	307
Saugers	1 725	2,759	1 767	3,289
Rock bass	49	94	43	71

8.15 Landings of the chief commercial fish (concluded)

Area and species	1980		1981	
	Quantity t	Value \$'000	Quantity t	Value \$'000
Sunfish	126	101	139	118
Arctic char	81	365	64	269
Other	1 041	515	1 220	621
Total, Inland	54 297	48,352	49 956	57,125

<sup>1</sup>Includes sardines.  
<sup>2</sup>Includes lake herring, chub and cisco.

8.16 Market value of all fishery products, by area and species (thousand dollars)

Area and species			Area and species		
	1979	1980		1979	1980
ATLANTIC COAST			PACIFIC COAST		
Groundfish	572,290	599,070	Groundfish	55,844	47,699
Catfish	2,882	2,823	Cod (gray)	8,712	6,949
Cod	271,588	317,559	Flounder and sole	5,631	6,121
Flounder and sole	90,719	86,032	Halibut <sup>2</sup>	20,141	11,714
Haddock	33,455	50,504	Lingcod	2,656	2,400
Hake and cusk	6,075	8,263	Sablefish	4,446	5,205
Halibut	4,803	5,670	Rockfish	6,349	9,065
Pollock	17,588	21,983	Other	7,909	6,245
Redfish	53,810	27,996	Pelagic and estuarial	494,374	340,359
Turbot	25,051	25,688	Herring	201,933	48,216
Other	66,319	52,552	Salmon	289,627	289,107
Pelagic and estuarial	186,428	207,693	Chum	21,262	64,609
Alewives	3,989	1,892	Coho	57,202	43,645
Herring (includes sardines)	120,154	135,261	Pink	76,867	58,655
Mackerel	11,439	11,181	Sockeye	81,009	68,223
Salmon	4,701	11,601	Spring	40,475	38,427
Smelts	2,460	2,458	Other	12,812	15,548
Capelin	5,373	11,676	Dogfish	2,045	2,389
Other	38,312	33,624	Other	769	647
Molluscs and crustaceans	367,103	331,908	Molluscs and crustaceans	14,270	15,294
Clams	4,016	4,998	Clams	4,952	5,865
Lobsters	125,161	114,198	Crabs	3,434	4,292
Oysters	1,202	1,696	Oysters	1,147	1,274
Scallops	98,817	98,669	Shrimp and prawns	2,818	2,407
Squid	52,400	21,146	Other	1,919	1,456
Crabs	61,651	65,435	Other sea products	1,142	589
Shrimp	20,596	25,583	Total, Pacific Coast	565,630	403,941
Other	3,260	183	Total, Inland	87,524	90,117
Other sea products	25,714	18,710	Total	1,804,689	1,651,439
Total, Atlantic Coast <sup>1</sup>	1,151,535	1,157,381			

<sup>1</sup>Excludes duplication.  
<sup>2</sup>Includes halibut landed by Canadian fishermen at United States ports.

8.17 Pacific Coast production of canned salmon

Kind	1980		1981	
	Quantity 21.8-kg cases	Value \$'000	Quantity 21.8-kg cases	Value \$'000
Chum	176 684	17,862	87 866	8,465
Coho	88 217	11,874	61 333	8,927
Pink	472 462	54,056	1 020 545	110,084
Sockeye	368 844	62,285	622 490	109,043
Spring	7 599	709	7 839	823
Steelhead	420	41	472	49
Total	1 114 226	146,827	1 800 545	237,391

### 8.18 Atlantic Coast production of frozen fillets and fish blocks

Area and species	1979		1980	
	Quantity t	Value \$'000	Quantity t	Value \$'000
NEWFOUNDLAND	96 172	230,308	90 873	229,019
Cod	50 041	114,668	50 603	125,332
Haddock	275	725	654	1,894
Redfish	9 417	23,683	4 956	11,312
Flatfish	28 702	81,864	27 759	81,291
Other	7 737	9,368	6 901	9,190
MARITIMES	72 827	157,891	87 429	172,766
Cod	24 123	56,909	24 387	57,963
Haddock	7 864	21,813	12 679	36,423
Redfish	8 697	21,358	5 367	11,365
Flatfish	5 615	20,770	6 553	20,736
Other	26 528	37,041	38 443	46,279
QUEBEC	9 640	21,425	8 073	17,500
Cod	4 439	10,123	3 381	7,665
Haddock	—	1	—	—
Redfish	2 190	4,426	2 283	4,491
Flatfish	1 923	5,457	1 293	3,811
Other	1 088	1,418	1 116	1,533
TOTAL, ATLANTIC COAST	178 639	409,624	186 375	419,285
Cod	78 603	181,700	78 371	190,960
Haddock	8 139	22,539	13 333	38,317
Redfish	20 304	49,467	12 606	27,168
Flatfish	36 240	108,091	35 605	105,838
Other	35 353	47,827	46 460	57,002

### 8.19 Number of registered fishermen, by province

Type and region	1979	1980	1981
Sea fisheries	32,352	35,080	28,587
Newfoundland	2,421	2,657	2,749
Prince Edward Island	10,799	11,432	11,388
Nova Scotia	5,165	5,753	5,802
New Brunswick	5,148	4,330	4,724
Quebec	19,834	18,871	17,454
British Columbia			
Total, sea fisheries	75,719	78,123	70,704
Freshwater fisheries	121	143	127
New Brunswick	571	502	517
Quebec	1,997	1,964	2,043
Ontario	5,508	5,220	5,369
Prairie provinces <sup>1</sup>			
Total, freshwater fisheries	8,197	7,829	8,056
Canada	83,915	85,952	78,760

<sup>1</sup>Includes Northwest Territories.

### 8.20 Number of employees in fish processing plants, by province

Province or territory	1979	1980	1981
Newfoundland	9,807	8,933	9,415
Prince Edward Island	739	841	758
Nova Scotia	6,126	6,675	6,487
New Brunswick	3,925	3,730	3,623
Quebec	1,848	1,756	1,885
Ontario	1	1	1
Manitoba	1	1	1
Saskatchewan	1	1	1
Alberta	1	1	1
British Columbia	4,229	3,950	4,208
Northwest Territories	1	1	1
Canada	27,995	27,084	27,486

<sup>1</sup>Confidential, included in Canada total.

8.21 Fur farm production (dollars)

Province or territory	Value of mink pelts produced on fur farms		
	1979	1980	1981
Newfoundland	—	1	240,033
Prince Edward Island	404,787	396,420	403,941
Nova Scotia	6,872,339	7,572,500	8,038,486
New Brunswick	535,462	555,871	518,826
Quebec	5,206,159	5,772,355	5,920,095
Ontario	20,629,065	18,571,049	18,346,501
Manitoba	2,567,673	2,157,159	2,118,778
Saskatchewan	439,661	176,309	170,417
Alberta	2,653,940	1,775,760	1,381,482
British Columbia	7,672,055	7,373,939	7,311,941
Yukon	—	—	—
Northwest Territories	—	—	—
Canada	46,981,141	44,351,362	44,450,500
	Value of fox pelts produced on fur farms		
	1979	1980	1981
Prince Edward Island	95,809	449,920	1,019,728
Nova Scotia	107,883	474,497	791,763
New Brunswick	285,327	869,399	1,344,693
Quebec	45,936	130,982	142,919
Ontario	396,305	781,175	716,350
Western Canada	127,308	343,794	621,401
Canada <sup>2</sup>	1,058,567	3,049,767	4,636,854

<sup>1</sup>Confidential.  
<sup>2</sup>Canada total for 1980 does not include Newfoundland for confidential reasons, 1979 and 1981 included in total.

8.22 Pelts of wildlife fur-bearing animals taken, by kind, years ended June 30

Kind	1978-79 fur season			1979-80 fur season			1980-81 fur season		
	Pelts No.	Total value \$	Average value \$	Pelts No.	Total value \$	Average value \$	Pelts No.	Total value \$	Average value \$
Badger	7,800	482,087	61.81	7,736	216,516	27.99	4,013	167,918	41.84
Bear									
White	515	564,290	1,095.75	371	385,820	1,039.95	427	377,677	884.49
Black or brown	4,109	308,379	75.05	4,710	304,057	64.56	3,872	214,546	55.41
Grizzly	20	5,000	250.00	21	9,975	475.00	17	8,075	475.00
Beaver	446,416	15,613,198	34.97	602,044	26,091,835	43.34	522,966	16,744,799	32.02
Cougar	39	8,023	205.72	16	2,880	180.00	19	3,681	193.74
Coyote	78,725	8,152,761	103.56	64,372	4,157,380	64.58	45,569	3,369,783	73.95
Ermine (weasel)	77,082	155,284	2.01	106,385	185,100	1.74	86,984	108,060	1.24
Fisher	9,771	1,503,473	153.87	14,725	2,055,316	139.58	14,935	1,922,843	128.75
Fox									
Blue	147	6,588	44.82	282	12,132	43.02	313	10,206	32.61
Cross and red	89,448	9,663,576	108.04	84,215	6,143,322	72.95	79,079	6,342,925	80.21
Silver	1,353	129,934	96.03	1,435	115,974	80.82	1,153	90,879	78.82
White	25,706	1,196,500	46.55	35,415	1,382,677	39.04	40,515	1,132,859	27.96
Not specified	334	35,803	107.19	1,232	108,773	88.29	8	361	45.12
Lynx	29,987	10,086,360	336.36	34,366	7,706,794	224.26	34,502	9,417,454	272.95
Marten	139,123	4,410,482	31.70	176,343	4,885,311	27.70	151,710	4,604,199	30.35
Mink	119,691	3,137,805	26.22	146,617	4,731,301	32.27	136,012	4,331,930	31.85
Muskrat	1,524,934	9,363,033	6.14	1,959,891	14,089,080	7.19	2,175,337	13,921,298	6.40
Otter	21,868	2,160,391	98.79	23,494	1,676,069	71.34	22,186	1,335,737	60.21
Rabbit	613	164	0.27	6,369	1,656	0.26	2,842	667	0.24
Raccoon	128,068	4,809,736	37.56	175,756	5,662,674	32.22	177,258	5,629,018	31.76
Seal									
Fur, North Pacific <sup>1</sup>	6,728	603,261	89.66	4,745	309,229	65.17	4,444	122,258	27.51
Hair <sup>2</sup>	182,479	3,627,642	19.88	2	2	2	2	2	2
Skunk	2,040	9,966	4.89	2,733	10,967	4.01	1,997	6,422	3.22
Squirrel	481,100	1,059,330	2.20	2,002,065	3,333,069	1.66	778,413	1,156,455	1.49
Wildcat	4,499	938,592	208.62	4,494	639,202	142.23	2,499	359,726	143.95
Wolf	6,982	883,966	126.61	5,791	567,359	97.97	6,001	516,072	86.00
Wolverine	774	149,929	193.71	777	..	..	609	115,467	189.60
Total	3,390,351	79,065,553	...	5,466,400	84,907,176	...	4,293,680	72,011,315	...

Average value is the price paid to trapper.  
<sup>1</sup>Commonly known as Alaska fur seal; value figures are the net returns to the Canadian government for pelts sold.  
<sup>2</sup>Hair seal data are on a calendar year basis for 1979 except for Northwest Territories which is on a fur year ending June 30.  
Hair seal data for Canada are confidential for 1980.

**8.23 Value of wildlife pelts produced (dollars)**

Province or territory	1977-78	1978-79	1979-80	1980-81
Newfoundland	2,371,450	2,831,440	489,740	572,064
Prince Edward Island	149,401	234,026	263,429	243,339
Nova Scotia	1,043,046	1,807,010	1,703,590	1,424,464
New Brunswick	1,402,170	1,866,602	2,310,124	1,557,141
Quebec	8,167,582	12,268,935	11,407,388	11,547,922
Ontario	10,743,316	18,757,757	24,407,053	19,710,411
Manitoba	5,116,082	7,882,404	9,615,690	8,240,663
Saskatchewan	5,383,245	10,151,264	9,126,599	8,081,373
Alberta	6,333,642	11,795,176	15,572,976	11,444,396
British Columbia	2,109,335	3,627,909	4,035,574	3,633,304
Yukon	3,843,633	934,508	917,657	1,298,008
Northwest Territories	420,009	5,738,261	5,336,010	5,026,250
Canada	47,675,472	79,065,553	84,907,176	72,011,315

**8.24 Exports and imports of furs, years ended June 30 (thousand dollars)**

Kind of fur	1977-78 fur season			1978-79 fur season			1979-80 fur season		
	Britain	United States	All countries	Britain	United States	All countries	Britain	United States	All countries
<b>EXPORTS</b>									
Undressed									
Beaver	1,295	825	7,999	1,187	1,387	11,887	1,623	3,579	27,444
Chinchilla	—	150	150	—	101	157	—	159	159
Ermine (weasel)	102	7	117	174	3	253	194	22	277
Fisher	—	505	1,036	2	1,206	1,746	29	950	2,113
Fox, all types	2,698	2,089	10,543	2,789	2,533	16,193	3,071	2,654	15,350
Lynx	52	3,594	6,078	122	6,809	9,905	399	4,240	8,882
Marten	504	1,512	2,726	1,056	1,729	4,121	1,213	2,037	5,068
Mink	689	12,311	18,348	1,041	12,660	26,620	1,488	15,927	43,820
Muskrat	5,100	650	9,279	4,653	452	9,702	8,585	1,021	16,984
Otter	—	40	437	1	58	382	—	80	781
Rabbit	4	184	187	—	220	225	—	198	521
Seal	525	—	5,557	127	1	1,774	443	—	5,081
Squirrel	513	2	586	1,024	—	1,121	1,718	—	1,736
Wolf	1,126	1,124	5,795	1,058	2,440	8,707	651	861	6,326
Other	2,139	1,569	13,472	1,630	2,114	23,519	2,840	2,980	44,032
Dressed									
Mink	20	286	2,922	18	1,388	5,037	55	1,540	7,079
Raccoon	—	10	407	4	51	651	31	164	1,645
Fur plates, mats	—	77	157	3	23	80	1	63	306
Other	49	2,453	3,688	48	1,162	3,064	278	1,420	4,769
Fur goods apparel	5,508	14,330	55,851	8,437	21,367	83,851	10,152	19,924	116,896
Total	20,324	41,718	145,335	23,374	55,704	208,995	32,771	57,819	309,269
<b>IMPORTS</b>									
Undressed									
China and Japan mink	124	—	156	107	—	121	9	—	10
Fox	1,631	4,713	9,255	5,696	12,301	28,188	1,893	10,154	21,374
Kolinsky	—	—	21	5	—	5	11	—	11
Mink	3,002	7,816	24,121	8,529	16,624	53,547	2,808	11,258	38,137
Muskrat	5	6,471	6,476	7	9,590	9,599	8	9,634	9,641
Persian lamb	—	—	48	—	59	118	49	74	241
Rabbit	—	13	29	—	60	87	3	157	176
Raccoon	—	23,014	23,041	328	52,291	52,623	31	45,171	45,536
Other	186	9,869	11,529	548	21,860	23,929	395	23,394	25,110
Dressed									
Hatters' furs	—	98	289	—	46	440	—	289	1,439
Mink	941	4,362	5,888	1,424	9,483	11,908	2,185	7,429	9,421
Seal	11	630	734	2	917	1,067	—	628	806
Sheep and lamb	1,565	1,866	4,411	1,645	2,913	5,683	1,694	3,104	6,601
Fur plates, mats	83	375	2,401	195	777	5,479	246	1,117	5,086
Other	176	2,796	4,170	296	4,660	6,875	159	3,582	5,628
Fur goods apparel	153	1,559	5,138	149	2,634	6,820	247	4,752	11,060
Total	7,877	63,582	97,707	18,931	134,215	206,489	9,738	120,743	180,277

**Sources**

- 8.1 – 8.3 Information Services, Canadian Forestry Service, Department of the Environment.  
 8.4 – 8.11 Manufacturing and Primary Industries Division, Statistics Canada.  
 8.12 – 8.20 Communications Directorate, Department of Fisheries and Oceans.  
 8.21 – 8.24 Agriculture Statistics Division, Statistics Canada.

CHAPTER 9

---

# AGRICULTURE



## HIGHLIGHTS

---

Agriculture makes up more than 25% of Canada's economic activity when the processing, wholesale and retail sectors are taken into account. During 1972-82 more than half the value of farm products sold came from livestock but the proportion from grain sales was generally increasing.

Canada is a net exporter of food products and usually captures about a 20% share of the world wheat trade. The USSR and China are the largest importers of Canadian wheat. Oilseeds are a growing export category.

Farms increased in size but declined in number from 733,000 to 318,000 between the census years 1941 and 1981. Yet the volume of agricultural production was about 175% greater in 1981 than in 1941.

Changes in farming have meant huge increases in capital requirements in buildings, machinery and equipment, and inputs produced off the farm — fuel, electricity, fertilizer, pesticides, seed and veterinary services. Interest expenses became the largest single farm cost in 1982.

## CHAPTER 9

---

# AGRICULTURE

<b>9.1</b>	<b>Changes in farm life</b>	<b>291</b>
<b>9.2</b>	<b>Looking ahead to the year 2000</b>	<b>292</b>
<b>9.3</b>	<b>Agriculture resources</b>	<b>293</b>
9.3.1	Agricultural regions	293
9.3.2	Farm ownership and labour	295
9.3.3	Transportation	295
9.3.4	Marketing and supplies	296
<b>9.4</b>	<b>Statistics on agriculture</b>	<b>296</b>
9.4.1	Census of agriculture, 1981	296
<b>9.5</b>	<b>Trends in the decade 1972-82</b>	<b>297</b>
9.5.1	Farm net income	298
9.5.2	Receipts from farming operations	298
9.5.3	Farm expenses	300
<b>9.6</b>	<b>Other federal services</b>	<b>301</b>
9.6.1	Agriculture Canada	301
9.6.2	Grains industry	301
9.6.3	Canadian Grain Commission	302
9.6.4	Canadian Wheat Board	302
9.6.5	Canagrex	303
9.6.6	Farm assistance	303
<b>9.7</b>	<b>Provincial services</b>	<b>305</b>
<b>9.8</b>	<b>Product and marketing controls</b>	<b>305</b>
9.8.1	Product standards	305
9.8.2	Marketing controls	305
<b>9.9</b>	<b>Agricultural education</b>	<b>306</b>

## TABLES

---

9.1, 9.2	Cash receipts from farming	308
9.3	Net income of farmers	309
9.4	Area and yield of crops	309
9.5, 9.6	Grain harvested	311
9.7-9.9	The grain trade	312
9.10	Wheat flour	314
9.11	Principal field crops	314
9.12, 9.13	Meat production	315
9.14-9.17	Milk, butter and cheese	316
9.18, 9.19	Fruits and vegetables	319
9.20-9.22	Honey, sugar and maple syrup	319
9.23	Egg production	320
9.24-9.26	Tobacco crops	320
9.27-9.29	Prices of farm products	322
9.30, 9.31	Food consumption	323
9.32-9.35	Census data on farms	326
9.36	Farm machinery	328
9.37	Age of farm operators	328
9.38	Farm capital	329
9.39	Energy expenditures	329
9.40, 9.41	Operating costs and depreciation	329

---

## CHARTS

---

Chart 9.1	Trends in farm size and population	294
Chart 9.2	Indexes of farm production	297
Chart 9.3	Farm income, 1972-82	299
Chart 9.4	Energy expenditures on farms	301

---

## CHAPTER 9

---

# AGRICULTURE

### 9.1 Changes in farm life

Today perhaps three or four Canadian families out of every 100 is a farming family. In 1885, when the first Canadian transcontinental rail line was completed, 60 families out of every 100 were farm families and the agricultural settlement of the west, and even of major areas of Eastern Canada, was only starting.

Canada is rapidly leaving behind the days when a close acquaintance with the farming experience could be said to be typical of the majority of Canadians, either through direct on-farm living experience or through having living relatives with that experience.

The census year showing the peak number of farms was 1941, with 733,000 farms. In 1981 the number of farms was 318,000 yet the volume of agricultural production was about 175% greater in 1981 than in 1941.

The 1940s marked the beginning of a time of major technological change. From 1921 to 1941 the number of farms changed very little and the introduction of the internal combustion engine, replacing horses, was gradual. But in the 10 years from 1941 to 1951 the number of horses on farms declined by twice as much as in the entire 20 years from 1921 to 1941. Altogether there was a reduction of 3 million horses by 1960, when the transition was essentially complete.

The increase in farm size and reduction of farm numbers has continued. Other changes, added to the use of petroleum and electricity for fuel, have included major varietal improvement, development of highly effective pesticides, control of animal health through antibiotics, broad improvement in poultry and livestock through breeding, improved efficiency in feeding, and greatly expanded use of fertilizers. All of this has meant huge increases in the capital requirements of farming in buildings, machinery and equipment, and in production inputs produced off the farm — fuel, electricity, fertilizer, pesticides, seed and veterinary and other services. Specialization in farming has become more and more characteristic of the industry.

The modern history of food production in Canada has therefore been one of constant and sweeping change, begun by the lure of new lands, driven by scientific and technological advances, shaken by

drought and depression, and challenged by the crisis conditions of two world wars, and in recent decades by the rising food needs of an exploding world population. One perspective on Canada's agricultural history that should not be forgotten is that the democratic aspirations of the nation were reflected in its homestead and other land settlement policies and programs that established the family owned and operated farm as the basis of agricultural development.

The drama of the last 100 years in Canadian agriculture has taken place on hundreds of thousands of individual farms — the farmer's home and place of business — through the combined efforts of homemaker and farmer: in cultivation, animal husbandry, food preparation and preservation, community organization and co-operation. It has also taken place in the laboratories and in the experimental plots and greenhouses of the scientists, on the drawing boards of engineers, in the work of extension specialists and elected officials of the community, and in agricultural schools and colleges. It has taken place in the advance of the science and technology required to transport, process and preserve the products of the farm and to ensure their quality and purity. It has taken place in battles against plant and animal diseases. It has taken place in the patient work of animal breeders, on and off the farm. It has taken place in efforts, still not altogether successful, to protect and improve the physical and nutrient capacity of the topsoil which is the very foundation of the industry.

Along with advancing technology, the urbanization of the population, and increasing incomes have gone massive changes in food processing and distribution. The costs of transportation, processing, packaging and retailing have risen and the farm gate price of farm products has become a declining proportion of the final consumer price. When the costs of food processing and distribution are added to the costs of inputs produced off the farm, the proportion of the consumer food dollar that represents a return to the farmer's land, labour and capital will be found to be little more than 10%. The bulk of the economic activity involved in supplying the food the consumer eats takes place off the farm, contributing to employment in towns and cities.

Yet the farmer remains a key player. In an industry dispersed over tens of millions of hectares the human challenges have been great, depending in the end on the competence, innovation, decision-making and co-operation of tens of thousands of individual producers.

A major portion of agricultural production in Canada is exported. Most important is the export of grains and oilseeds, and especially of wheat. In 1982 nearly \$6 billion of grains and oilseeds were exported (\$4.3 billion of wheat), equal to 32% of the entire gross cash receipts of Canadian farmers for the year.

The role of government — federal, provincial and municipal — has been crucial, for research, extension, credit, regulation, inspection, orderly community development, and services of many kinds. In agriculture government has had a unique pervasiveness and intimacy because of the extremely dispersed nature of farming, and the very limited size of the individual enterprise. Agriculture has been so fundamental and vital to the nation's development that its progress could not be left to chance.

From the early days of settlement farmers and their wives recognized a need to take organized action to serve their economic, social and professional needs. For example, they organized to press for government legislative and policy action, to form their own co-operative marketing and supply businesses, to assist in acquiring the knowledge and skills in homemaking so essential for survival in a new and often unfamiliar environment, to take legal action when their rights were threatened, to associate for improvement in animal breeding, cultivation methods and seed growing.

The farmer's organizational needs were not only to help him learn to do his job better, but to protect himself from economic exploitation and damaging instability. They were also to help ensure that there was orderly regulation and inspection for grading, quality control, and protection from infectious diseases.

The history of farmer organizations in Canada makes a long, complex and often dramatic story. The issues and problems are not all settled today, nor is the drama lacking. The dramatic and complex debate surrounding the federal government move to restructure western grain transportation policy and Crow's Nest Pass statutory rates provides a case in point.

As the number and proportion of farmers declined the role of farm organization has seen important changes. When farmers represented a large proportion of the population and the problems of isolation of the farmer were greater, farm organization functioned in the field of general social policy more actively than it does today, for example in adult education, public broadcasting and health care. Particularly at the federal level its role in these areas has been reduced, with its work much more generally

focused on strictly agricultural concerns. This is less true at the provincial level and even less at the community level.

The Canadian Federation of Agriculture, by whom the writer has been employed for many years, is a federation of farmer organizations in every province of Canada except Newfoundland. Although the only fairly comprehensive umbrella farm organization in Canada, it is not fully representative of farmer organizations. When one speaks of farmer organization this should be recognized as a general term that embraces the substantial body of farmer-owned marketing and supply co-operatives, and producer marketing boards, as well as general membership structures and commodity associations. Democratic farmer organization in Canada is diverse, reflecting the complexity of views and interests in the industry. — DAVID KIRK

## 9.2 Looking ahead to the year 2000

Few sectors in the Canadian economy have been as profoundly transformed since World War II as agriculture. Future developments will be sensitive to major technological innovations, the changing nature of the national economy and world food trade, and the nature of government intervention in agriculture — all difficult to predict. Perhaps the safest prediction is that structural change in the agricultural sector by the year 2000 is likely to be as deep and far-reaching as the changes since World War II.

**Technological change.** An accelerating pace of scientific innovation, focused around bio-technology and computers, will affect agricultural practices. Embryo transplants based upon cloned cells, allowing genetically superior animals to be propagated more quickly, will likely become as commonplace as artificial insemination is today. Genetic engineering may result in grain varieties which can fix nitrogen, lowering demand for petrochemical fertilizers. Emphasis on the integration of biological procedures to control pests with a new generation of farm chemicals can be expected. Although not yet commercially viable, a potato plant that eats potato bugs has been developed.

Micro-computers are likely to have an impact on the non-physical work of farmers to equal the impact machinery had on physical work formerly required. Inexpensive micro-computers and software developed specifically for farm use will rationalize day-to-day production and financial management decisions. Rapid electronic information processing may be a prerequisite to the efficient diffusion of new technologies such as integrated pest control. New computer technologies may allow not only more efficient operation of large machines but may operate the machines themselves. By the year 2000 the first generation of farm robotics may be in place.

**Economic and social change.** Historical trends toward a decline in the number of farmers will likely

continue. During the 1970s this decline was offset by an increase in hired farm labour. The ratio of hired labour to farmers is expected to increase. A unionized farm labour force is a possibility; farm labourers will be not only traditional hired hands but qualified scientists, technicians and machine operators. Rural communities will change because of the smaller number of farmer entrepreneurs and a relatively larger proportion of salaried farm employees.

The new technologies are expected to concentrate production on fewer and larger farms, particularly in the confinement production of animals and horticultural crops. Individual proprietorships and partnerships, traditionally the legal form of farm ownership, are likely to be increasingly displaced by incorporated farms. Most of these will be large units operated by farm families who have incorporated to gain tax and inheritance advantages. But as farm production is standardized, a certain amount of it may be directly controlled by business corporations.

Indirect control by business corporations may be even more important. Agribusiness concerns may be expected to increase their vertical contracting with producers, to maintain a guaranteed supply of products of uniform quality and at predictable prices, or to supply a reliable and expanding market for farm inputs. Some decision-making may be expected to be transferred from farmers to corporate managers.

Who will be the farmers in this new agricultural sector? What kind of farms will provide the food supply? The 1981 Census of Agriculture suggested some answers. Only one-third of the farmers enumerated in the 1971 Census of Agriculture were still farming in 1981 and had increased the real output of their farms during the decade. Only some farmers succeed in taking advantage of new opportunities. Rapid structural change may result if only a minority of Canadian farmers adapt to the new technologies promptly, gain production advantages which permit them to outbid their neighbours in the land market, and expand their operations to the considerably larger scale permitted by the new agricultural technology.

**Market changes.** Will there be a market for a growing level of output permitted by technology? Canada's population is expected to grow slowly. Food consumption per capita has also tended to grow slowly. Present policy specifies that milk, eggs, chicken meat, and turkey meat be produced nearly exclusively for the Canadian market.

Beef, pork, other livestock, and all crop production have access to foreign markets. World population growth will increase the need for food from countries such as Canada, but developing countries with rapidly growing populations will likely find it difficult to earn the foreign exchange required to satisfy these food needs. Developed countries have adopted policies of self-sufficiency in meat production

and are increasingly moving in this direction for feedgrains as well. Communist countries have been major importers of Canadian wheat and barley. Their demand has fluctuated due to their varying ability to achieve their production goals, vigorous competition from major exporters, and the political element in purchasing decisions. One of the growth points in world food imports has been among the developing countries, but these countries also pursue goals of self-sufficiency. Recent Canadian sales of breeding cattle to South Korea indicate one kind of market niche which might enable the agricultural sector to thrive in world trade. As the year 2000 approaches, Canadian farmers, agribusiness concerns, and governments will have to be as innovative in their marketing practices as in their adoption of new technologies if Canada's position as a major agricultural exporter is to be maintained and expanded. — PHILLIP EHRENSAFT and RAY BOLLMAN.

### 9.3 Agricultural resources

Agriculture is a major industry in Canada. About 68.3 million hectares in 10 provinces are cultivated; 46.1 million hectares are improved land. Farm cash receipts exceeded \$18.8 billion in 1982 and agricultural and food exports exceeded \$9.3 billion accounting for 11.4% of Canada's total exports.

Including the processing, wholesale and retail sectors, agriculture accounts for more than 25% of Canada's economic activity. Canada is one of four net food exporting countries in the world today.

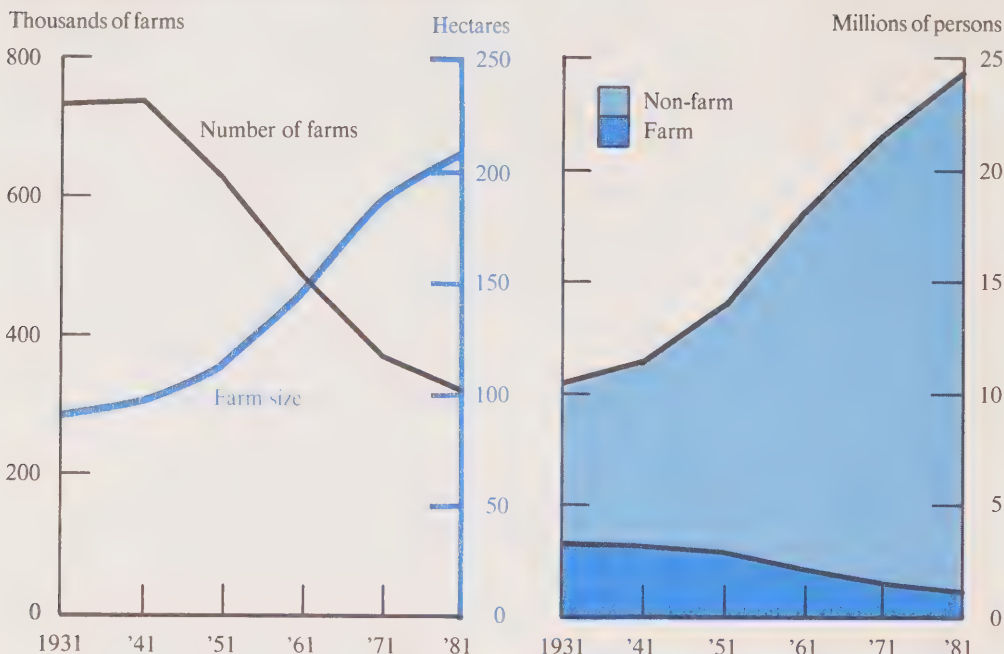
#### 9.3.1 Agricultural regions

There are four main types of farms in Canada. Livestock farms include those specializing in feedlot finishing of cattle, large-scale feeding of hogs bought as weanlings, breeding and raising other livestock, dairying, and poultry production for meat and eggs. Grain farms produce such crops as wheat, oats, flax and canola/rapeseed. Combination farms produce both grain and livestock. Special crop farms produce vegetables, fruits, potatoes or other root crops, tobacco or forest products. Each region has its specialties, but none is limited to one type of farming.

**The Atlantic region** includes Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick and the Gaspé district of Quebec. It is hilly, with a covering of relatively fertile soil developed under forest cover. The climate is modified by the sea, but also affected by cold currents from the coast of Labrador and by northern winds. Precipitation averages 760 to 1 400 mm (millimetres) annually. Mixed farming is general and forage crops support a healthy livestock industry. Small farmers may combine fishing or lumbering with farming.

Newfoundland agriculture is only important locally because of rough terrain. Bogland offers potential for reclaiming and vegetable farming.

Chart 9.1

**Trends in farm size and population, 1931-81**

Farming is the leading industry on Prince Edward Island. Potatoes are the major crop but the land also supports mixed grains, dairying and other livestock enterprises. Small fruits and vegetables are produced.

Nova Scotia's main agricultural areas surround the Bay of Fundy and Northumberland Strait where they are protected from Atlantic gales. Dairying and poultry production are common and beef farming is increasing. The Annapolis Valley is famous for fruit, mainly apples, but strawberries and blueberries are coming to the fore. New Brunswick produces potatoes and livestock in the Saint John River Valley and there is mixed farming in the northwest. More than a third of the commercial farms in the province are dairy farms.

**The central region.** This lowland area bordering the St. Lawrence River includes the Ottawa Valley and extends through Southern Ontario to Lake Huron. Fertile soils, mostly formed by glacial drift and lake sediment developed under deciduous forest cover, and a mild climate modified by the Great Lakes and the St. Lawrence River, allow varied farming. Precipitation averages 760 to 1 140 mm a year. This most densely populated part of the country provides large markets for farm produce.

Well over half of Quebec commercial farms are now dairy farms and supply large butter and cheese

industries. Livestock farms, specializing in beef cattle, hogs, poultry and egg production, and mixed farms are common. Forage crops account for the largest cultivation and oats and corn are produced for feed. Fruits and vegetables are becoming prime crops. Sugar beets and flue-cured tobacco are also grown and processed.

Ontario has specialized crops in southerly regions, the largest number of commercial livestock farms, and is second in dairy farms. Forage crops are the largest cultivated crops; others are corn, mixed grains, winter wheat, oats and barley.

Dairy farms are concentrated in southwestern Ontario, in the Bruce Peninsula and in the eastern counties. Beef is a specialty in Lake Huron and Georgian Bay areas. Sheep, poultry and hog production is widespread. Ontario is a major producer of apples and the Niagara Peninsula grows most of Canada's tender tree fruits and grapes. Vegetables are grown near most large centres. Maple syrup is a major sideline for Ontario and Quebec farmers.

**The Prairie region.** Manitoba, Saskatchewan and Alberta contain 80% of the farmland in Canada. Long sunny summer days coupled with sufficient precipitation ensures strong healthy growth of high quality grain such as hard red spring wheat, by far the

largest single crop. Rangeland and pasture support a large number of cattle. Livestock rearing is a major industry.

Manitoba, with the highest prairie rainfall and an average of 100 frost-free days, has more varied farming. Wheat and other grains predominate but canola/rapeseed and flax are also grown extensively. There is considerable mixed farming with emphasis on beef cattle. Vegetables, sugar beets and sunflowers are grown in south central Manitoba and processed locally. Dairy farms are common around Winnipeg; hog production and beef production are widespread.

Saskatchewan grows approximately 60% of Canadian wheat and large quantities of other grains, aided by light spring rainfall and long sunny days. Canola/rapeseed and other oilseeds are popular. Irrigation is increasing and assists vegetable and forage crops. Mixed farming is common in the north where rainfall is higher. Poultry and egg production as well as livestock production such as hogs, beef and dairy cattle are major contributors to the Saskatchewan agriculture economy.

Alberta, second to Saskatchewan in grain production, has more beef cattle ranches than any other province, mainly in the south and in the Rocky Mountain foothills. Cattle-feeding operations are expanding and Alberta is a leading hog and sheep producer. In the 1981 Census of Agriculture Alberta farms reported about 400 000 hectares under irrigation, accounting for \$665 million in sales of agriculture products, roughly half the irrigated land producing cereal crops and oilseeds, one-third tame hay, pasture and fodder crops and the remainder, specialty crops. Dairy and poultry products are prominent in the mixed-farm economy. In the Peace River district north of 55° latitude, more than 8,000 farmers produce over 1.6 million tonnes of wheat, oats, barley and canola annually; livestock producers maintain large numbers of cattle, hogs and sheep; honey produced exceeded 8 000 t in 1982.

**The Pacific region.** Only 2% of British Columbia is agricultural. Farms, mostly small and highly productive, are concentrated in the river valleys, the south-central mainland and southern Vancouver Island.

Livestock and dairying account for most of the agricultural production. Hogs and beef cattle are raised on many farms, beef particularly in the central and southern interior areas. Dairying and poultry meat and egg production are concentrated in the lower Fraser Valley where the population is large. Mixed farming is scattered throughout British Columbia.

British Columbia is Canada's largest apple producer. The Okanagan Valley is also noted for peaches, plums, apricots, cherries and grapes. Raspberries and strawberries are grown in the Fraser Valley and on Vancouver Island along with other horticultural crops such as tomatoes, sweet corn and

potatoes. The processing industry is well developed. Vancouver Island's mild climate also produces flowering bulbs.

**The northern region.** The agricultural area north of latitude 55° consists of parts of northern British Columbia, Yukon, and the Mackenzie River Valley in the Northwest Territories. Agricultural settlement is not encouraged because of the harsh climate and small population. Precipitation varies from light in the northern Yukon to heavy on the mountainous coast of British Columbia. Frosts can occur in any month, but crops grown on northern slopes escape some damage. The North is estimated to have 1.3 million hectares of potentially arable land and large expanses of grazing land, but there are probably fewer than 30 commercial farms in the region. Dairy products, beef cattle, forage crops, feed grains and vegetables are produced for the small local market.

### 9.3.2 Farm ownership and labour

Most farms are owned by the operating farmers but as farms increase in size more land is being rented. Payment is usually cash or a share of crops or receipts.

Farm families provide most of the labour but experienced workers are often employed on dairy farms, and seasonal workers for harvests. In the West, combine operators often move their machinery with the harvest, starting in the United States and moving into Canada later in the season. Potato harvesters follow the same pattern in the East.

### 9.3.3 Transportation

On January 1, 1984 the Crow's Nest Pass Agreement was replaced by the Western Grain Transportation Act. It provides that producers of grain will pay a fixed share of the freight rates to move their grain to port. Railways will undertake an investment program to expand western railway capacity and expenditures for adequate branch line maintenance. Freight rates will be determined by the Canadian Transport Commission. Railways have been the traditional means of transporting agricultural products to large markets and ports. Trains move wheat and livestock to Canadian markets and to elevators in Vancouver, Churchill and Thunder Bay for shipment abroad. Bulky products such as sugar beets are usually shipped by rail.

Although railways have retained their importance on the Prairies, many branch lines have been abandoned and farmers now ship their produce at least part way in their own trucks. Eggs, poultry, cream, fruits and vegetables go to local markets by road, and milk is generally collected at farms by tank trucks. Commercial farms and co-operatives use trucks for marketing and distributing agricultural products and in delivering supplies.

Water routes supplement these means. The Great Lakes have long been used to ship grain from Thunder Bay to Eastern Canada and since the opening

of the St. Lawrence Seaway in 1959 the lakes have been open to ocean-going vessels. Churchill is a seasonal port for Prairie grains; Vancouver and Halifax are year-round ports.

### 9.3.4 Marketing and supplies

Farm product marketing combines private trading, public sales and auctions, and sales under contract and through co-operatives or marketing boards.

Canada's principal livestock markets are at Montréal, Toronto, Winnipeg, Calgary and Edmonton. Most cattle and calves are marketed by auction at public stockyards; some are exported; hogs, sheep and lambs are sold directly to packing houses. Hog sales are usually handled by marketing boards. Canadian marketing agencies regulate sales of eggs, turkeys and chickens.

Provincial marketing agencies, under direction of the Canadian Dairy Commission, regulate fluid milk marketing in terms of quality, prices and deliveries. In all provinces except Newfoundland, a marketing plan allocates producers a share of the Canadian market for milk used for manufacturing.

The Canadian Wheat Board is responsible for marketing wheat, oats and barley, grown in the Prairie provinces. All Ontario wheat is sold through the Ontario Wheat Producers' Marketing Board.

Fruit and vegetables are distributed through fresh and frozen food markets, canneries and other processors. Most produce is grown under a contract or a pre-arranged marketing scheme; marketing boards, producer associations and co-operatives are common. Tobacco is controlled by marketing boards in Ontario and Quebec, soybeans by a board in Ontario and sugar beets by contracts with refineries in Quebec, Manitoba and Alberta.

Farmers' co-operatives handle or market crops or livestock and supply goods and services needed in farming. Co-operative pool arrangements for farm products guarantee farmers cash advances on deliveries.

Marketing of seed is carried on by private seed companies, farmer-owned co-operatives and seed growers. Seed grades are established by federal regulation. Pedigree seed is produced by members of the Canadian Seed Growers' Association under conditions that ensure purity.

Farm machinery, building materials, fertilizers, agricultural chemicals and other supplies are obtained through commercial and co-operative outlets.

## 9.4 Statistics on agriculture

Statistics Canada collects, compiles, analyzes and publishes statistics relating to agriculture. Information is obtained through censuses, surveys and administrative records. Primary and secondary statistics on agriculture are published annually, semi-annually, quarterly and monthly.

Primary statistics relate mainly to reporting crop conditions and production, crop and livestock inventories, wages of farm labour and prices received by farmers for their products. Secondary statistics relate to farm income and expenditure, per capita food consumption, marketing of grain and livestock, dairying, milling and sugar industries and cold storage holdings.

By collecting annual and monthly statistics, the federal agriculture department and various provincial departments, as well as such agencies as the Canadian Grain Commission, the Canadian Wheat Board and the Canadian Dairy Commission contribute data and aid directly in Statistics Canada's statistical work. Principal annual statistics are derived from an annual probability enumerative survey. Supplementary annual, quarterly and monthly data are provided by thousands of farmers throughout Canada who send in reports voluntarily. Valuable data are also obtained from dealers and processors who handle agricultural products.

Much of the demand for agricultural statistics is derived from the policy objectives of the food and agriculture sector. These objectives are related to the supply to society of high quality food at reasonable prices and the assurance of a decent living to efficient farmers. Their attainment depends in part on the efficient operation of commodity markets. Agricultural statistics play an important role because efficiency improves when all participants have equal access to good information. The agriculture statistics division of Statistics Canada is continually striving to produce superior data and to make them accessible to all interested parties, through the census of agriculture and intercensal surveys. Surveys keep information updated between census years. They use the census as a benchmark and also as a source from which to draw samples.

Agricultural statistics are an essential analytical tool for a wide variety of situations. For example, private firms use census data to help determine the best markets for new products. Public agencies need good information in policy development. Agricultural researchers use census data to analyze trends and developments in the industry.

### 9.4.1 Census of agriculture, 1981

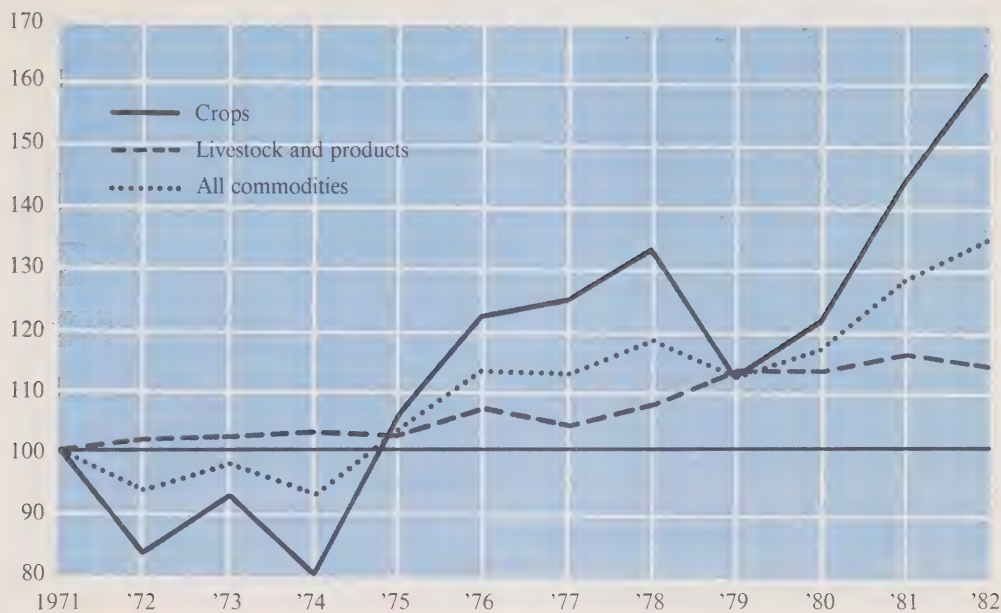
A census of agriculture has been taken every five years since 1951 and before that was taken every 10 years from 1871 to 1951. From it statistics are compiled on crops, livestock, farm land, labour, capital and many other variables that are significant to the public and private sectors.

**Number of census-farms.** For census year 1981 a census-farm was defined as a farm, ranch or other agricultural holding with sales of agricultural products during the past 12 months of \$250 or more. For census year 1976 a sales figure of \$1,200 or more was used. To compare with 1981 data, census data for

Chart 9.2

# Indexes of farm production

(1971=100)



1976 given here represent holdings of one acre or more with annual sales of \$50 or more. On this basis the total number of census-farms in Canada in 1981, at 318,361, was less than in 1976 when there were 338,578 (Table 9.32).

**Improved land areas.** All provinces except Newfoundland, Prince Edward Island and Quebec reported increases in improved land areas. For Canada as a whole, the 46.1 million hectares of improved land for 1981 increased 4.3% from that recorded in 1976. The area under crops, increasing by 9.3%, accounted for the majority of this increase.

**Size of census-farms.** In 1981, 49% of census-farms in Canada contained less than 97.1 hectares compared with 48% in 1976. This relatively small change suggests that the trend toward consolidation into larger holdings may have moderated. However, wide variation among provinces continues. The proportion of farms under 97.1 hectares in the Atlantic provinces ranged from 36% in New Brunswick to 87% in Newfoundland; in Quebec 43%, Ontario 52%, Manitoba 27%, Saskatchewan 14%, Alberta 29% and British Columbia 71%.

**Sales class.** Each census-farm in 1981 reported its sales for the calendar year 1980 (Table 9.34).

**Product type.** Since the sales information collected in 1981 was not detailed by commodity, the farm

typing scheme was based on potential value of sales by commodities. This value was imputed from the 1981 physical inventories reported for the census-farm. With the exception of farms classified as institutional, all census-farms in 1976 with \$2,500 or more of agricultural sales were classified as one of 12 product types if 51.0% or more of the potential sales were obtained from this type.

**Farm machinery.** Table 9.36 indicates that between 1976 and 1981 the number of swathers increased by 7%, farm trucks by 7%, tractors by 4%, automobiles by 3%, pick-up hay balers by 3%, forage crop harvesters by 2% and grain combines declined by 2%.

**Age of census-farm operators.** About 21% of census-farm operators were under 35 in 1981, 48% were in the 35-54 age group and 31% were over 55 showing a trend to younger operators. Corresponding percentages for 1976 were 19%, 49% and 32%.

**Farm capital.** Farm capital is composed of the following three items: land and buildings (80%), machinery and equipment (13%), and livestock and poultry (7%). The 1981 total capital value is about 14 times the 1951 value (Table 9.38).

## 9.5 Trends in the decade 1972-82

**International influences.** Canada is a net exporter of agricultural products, so world events which affect

its trading partners also affect the agriculture sector. The decade 1972-82 was characterized by some major international events that affected the Canadian agricultural industry and, in turn, the incomes of Canadian farmers.

During the early 1970s the Organization of Petroleum Exporting Countries (OPEC) increased energy prices significantly. This gave them more potential to import Canadian agricultural products because they had more purchasing power. Their increased demand for products was partially offset by reduced exports to the non-OPEC countries which were experiencing financial difficulties because of the energy crisis.

The USSR instituted a five-year agricultural plan in 1971. One goal was to increase per capita meat consumption in the Soviet Union. This represented a significant shift in Soviet policy. In the event of shortfalls in domestic feed grain production, the USSR imported feed grains rather than liquidating herds, as had been done previously. The USSR is the largest importer of Canadian wheat, the major agricultural export from Canada. This, combined with other factors affecting the supply of world grains, resulted in marked price increases for Canadian grains in the 1972-73 and 1973-74 crop years.

In early 1980, the United States embargoed sales of wheat and corn to the USSR. The embargo was in effect until the spring of 1981 and resulted in depressed prices in the North American market due to expectations of decreased demand. The Canadian government made special supplementary payments to Prairie and Ontario farmers to offset losses resulting from these depressed prices. Subsequent to the embargo, the USSR moved toward more diversity in their import markets and Canada benefited to some extent from this policy change. Between the 1980-81 and 1981-82 crop years, Canadian wheat exports to the USSR increased by 26% to 5 million tonnes.

An adjustment in China's agricultural policy during the 1976-78 period also benefited Canada. By deciding to improve its food supply through increasing both production and imports China provided additional market opportunities and has become the second largest importer of Canadian wheat (3.1 million tonnes in 1981-82).

#### 9.5.1 Farm net income

Two different estimates of farm net income are prepared by the agriculture statistics division of Statistics Canada. Realized net income is obtained by adding farm cash receipts from farming operations, supplementary payments and the value of consumption of home grown products and deducting farm operating expenses and depreciation charges. Total net income is obtained by adjusting realized net income to take into account changes in livestock inventories and stocks of field crops on farms between

the beginning and end of the year. In the period 1972-82, realized net income in nominal terms increased from \$1.9 billion to \$3.5 billion; total net income rose from \$1.6 billion to \$3.8 billion. In constant 1971 dollars, however, realized net income decreased from \$1.8 billion to \$1.3 billion and total net income declined from \$1.6 billion to \$1.4 billion.

#### 9.5.2 Receipts from farming operations

Estimates of cash receipts include cash revenue from the sale of farm products, Canadian Wheat Board participation payments on previous grain crops, cash advances on farm-stored grains and deferred income from the sale of grain in Western Canada, deficiency payments made by the Agricultural Stabilization Board and supplementary payments. Cash receipts from the sale of farm products include returns from all sales of agricultural products except those associated with direct inter-farm transfers. The prices used to value all products sold are prices to farmers at the farm level; they include any subsidies, bonuses and premiums that can be attributed to specific products but are net of storage, transportation, processing and handling charges.

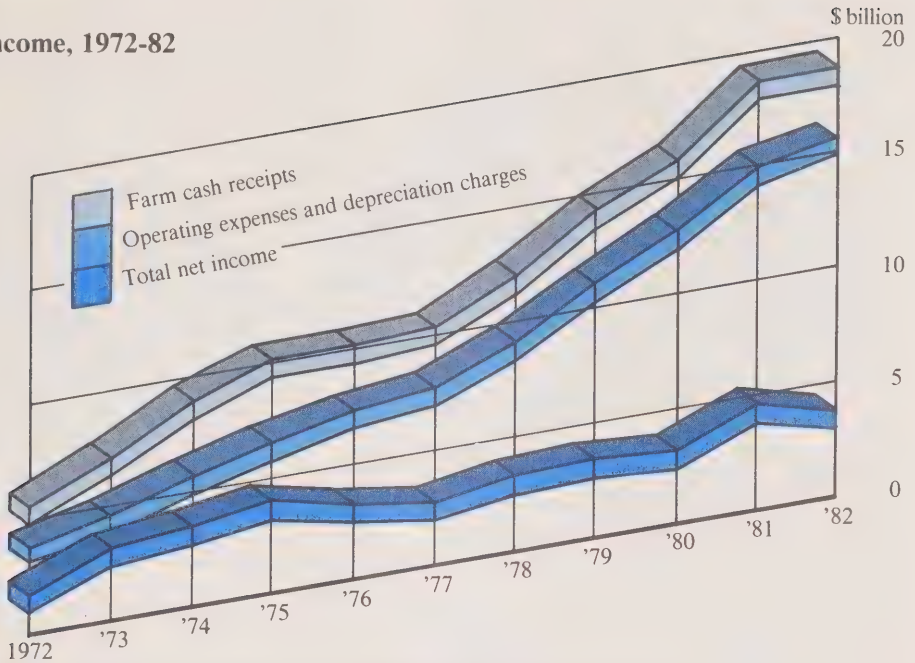
Total cash receipts in 1972 were \$5.5 billion. By 1982 they had increased to \$18.8 billion. The index of farm gate prices indicates that prices increased 2.6 times between 1972 and 1982, while the annual index of farm production shows an increase of 1.4 times over the same period.

**Crop receipts.** In the early years of the 1972-82 period, crop receipts accounted for about 39% of total cash receipts, while livestock receipts were 57% of the total. The remainder was made up of receipts for forest and maple products, provincial income stabilization payments, dairy supplementary payments, deficiency payments and supplementary payments. In general, although there was not always such a large percentage difference, livestock receipts accounted for the largest portion of cash receipts. Exceptions occurred in 1975 and 1981 when crops and livestock each accounted for 48%. In 1975 the increased crop receipts resulted mainly from price strength in wheat, and wheat receipts were 17% of total cash receipts. In 1981, although grain prices were not as strong, record marketings were realized. The decade ended with crops accounting for 45% and livestock 51%.

Cash receipts from crop production rose from \$2.2 billion in 1972 to \$8.5 billion in 1982. The index of prices received by farmers indicates that farm gate crop prices increased 2.7 times in the 1972-82 period. The index of farm input prices indicates an increase of 3.3 times on items related to crop production. While year-to-year variations obscured long-term trends, total production generally increased due to higher yields and larger seeded areas, especially in cereal crops. Factors affecting seeded areas were price expectations, government programs, market potential and the expansion of

Chart 9.3

Farm income, 1972-82



✧ Total net income = farm cash receipts + supplementary payments + income-in-kind — operating expenses and depreciation charges + value of inventory change.

traditional growing areas. Especially in the case of grain corn, development of new hybrid varieties permitted expansion of production in non-traditional areas. The index of farm production reveals an increase of 1.9 times for all crops between 1972 and 1982.

Domestic per capita consumption of grain was generally unchanged between 1972 and 1982. Although the amount of western grain fed to livestock was fairly stable, grain corn was fed in increasingly large volumes. Approximately 80% of grain corn production is in Ontario and the expanded volume reduced the demand for western barley and imported US corn. In the 1981-82 crop year, Canada for the first time became a net exporter of grain corn. Preliminary import-export data for 1982-83 indicate, however, that Canada will again become a net importer of grain corn.

Due to a constant and relatively small domestic demand for wheat, Prairie farmers have always relied on foreign markets for wheat sales. Exports have tended to increase in line with the growing world market for wheat. For the 1981-82 crop year, exports of wheat and wheat products totalled 18.4 million tonnes, up from an average of 12.6 million tonnes for the years from 1972-73 to 1974-75. While export volumes increased over the decade, Canada's share of

the world export market for wheat declined slightly from 22.9% in 1972-73 to 17.2% in 1981-82.

Production of canola/rapeseed varied over the 1972-82 period from a low of 1.2 million tonnes to a high of 3.5 million. Price and crop rotation were factors in determining the annual level of output. During the early 1970s there was a clear transition to the seeding of low erucic acid varieties for human consumption. As the new canola varieties began to dominate production, the export demand for canola strengthened. Since 1978 Japan has typically imported more than one million tonnes of canola seed a year. Domestic consumption of canola oil has increased substantially and about one million tonnes of canola seed are now crushed annually. Canola oil has captured almost half of Canada's retail vegetable oil market and is used increasingly in the manufacture of margarine, shortening and salad oil.

**Livestock receipts.** Cash receipts increased from \$3.1 billion in 1972 to \$9.6 billion in 1982. Farm gate prices for livestock increased 2.5 times over the period. At the same time, input prices related to animal production increased about 2.3 times. The index of farm production also shows a slight production increase (1.1 times) over the decade.

In the domestic market, apparent per capita consumption of red meats reached a record high of

81.6 kg in 1976 largely because beef consumption was at a record high of 51.4 kg per capita. By 1982 apparent per capita consumption of red meat dropped to 72.0 kg and of beef to 40.4 kg, levels comparable to those of the late 1960s and early 1970s. In 1980 apparent per capita consumption of pork reached a record high of 31.3 kg before dropping to 27.9 kg in 1982.

The number of pigs on farms in Canada decreased during the early 1970s to a low of 5.5 million head at July 1, 1975 before climbing to a record high of 10.2 million at October 1, 1981. Most of this expansion occurred in Eastern Canada. Between 1976 and 1981 significant changes occurred. The number of farms reporting pigs in 1981 dropped 12%, from 63,606 in 1976 to 55,765 farms but the average number of pigs per farm nearly doubled from 91 to 177.

Meat exports increased substantially. Exports of dressed beef rose from 38.9 million kilograms in 1972 to 82.9 million kilograms in 1982, while live cattle and calf exports went from 299,625 head to 504,933 head. The exports went mostly to the United States.

Pork exports more than tripled in both the dressed and live categories. Dressed pork exports increased from 52.4 million kilograms to 163.5 million kilograms, while live exports rose from 88,725 head to 305,294 head. Major customers were the United States and Japan.

The per capita consumption in Canada of poultry — chickens, stewing hens and turkeys — increased by 12% over the period 1972-82, entirely due to more chicken consumption. Consumption of broilers and heavy birds went from 14.2 kg per person to 17.3 kg in 1982. Consumption of eggs per capita decreased from 20.5 dozen to 18.8 dozen.

The 1981 Census count of layers stood at 24.2 million, about 4% higher than the 1976 Census count of 23.2 million. All other chickens except layers and pullets increased by 6% to 56.1 million.

In 1982, 7.6 million kilolitres of milk were sold off farms, a 4% increase since 1972. Farm cash receipts including supplementary payments rose from \$880.0 million to \$2.9 billion. About one-third of this milk was used for fluid purposes and the rest for industrial purposes.

Production of creamery butter declined by 7%. Butter is the most important dairy product, with 56% of industrial milk and cream going into its manufacture.

Production of other major dairy products increased: cheddar cheese was up 2% to 89 056 tonnes; variety cheese, up 211% to 80 822 tonnes; ice cream, up 13% to 311 970 kilolitres and yogourt, up 209% to 37 914 kilolitres.

### 9.5.3 Farm expenses

Inflationary conditions during the 1972-82 period resulted in dramatic production cost increases. Total

farm operating expenses and depreciation charges, \$3.8 billion in 1972, increased fourfold to \$15.6 billion with 70% of the increase directly the result of price increases. Inflation also greatly increased the value of farm assets. The value of farm real estate climbed from \$18 billion in 1972 to \$104 billion in 1982, about a sixfold increase, again largely the result of price though some was the result of investments in farm building construction, renovation and land improvement.

During the decade farmers substituted capital for labour as demonstrated by increased investment in farm machinery, increased farm machinery depreciation costs and a corresponding decrease in amounts spent on hired farm labour.

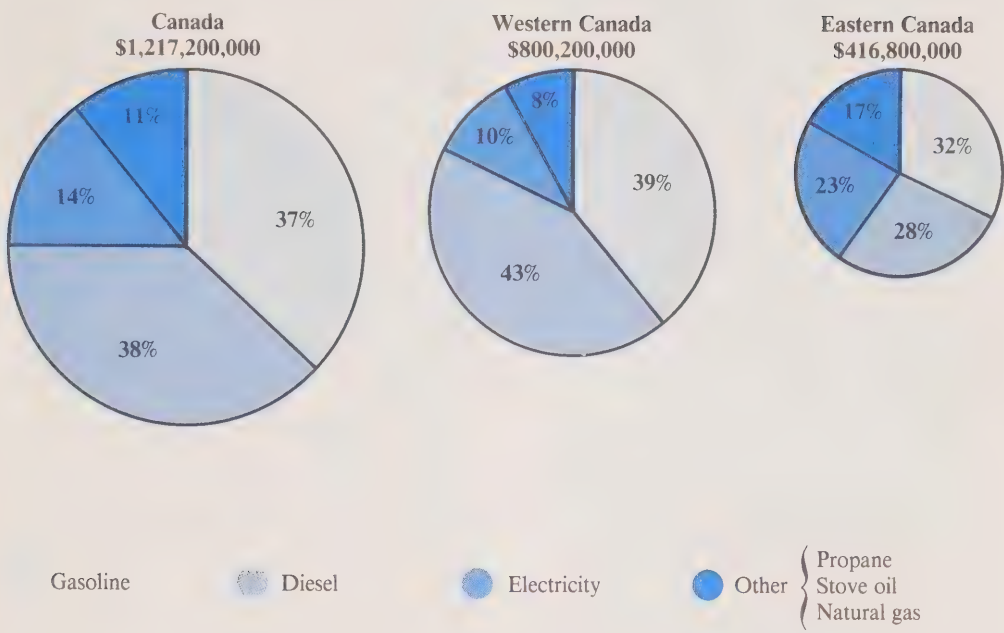
Many expenditures which were a substantial proportion of production costs in 1972 had been replaced in 1982 by others. These changes were largely the result of world developments such as sharply higher interest rates, the rapid increase in energy prices, lower grain prices late in the decade, changing farming practices and the continuous movement to substitute capital for labour. An example of these changes is farm expenses for interest. In 1972 interest expenses represented 9% of total farm expenditures, ranking as the fourth largest expense, well below feed which was the largest at 16%. In 1982 interest expenses became the largest single farm expenditure at \$2.2 billion or 14% of all farm expenses.

Fuel in 1972 represented 7% of all farm expenses, ranking fifth, but moved up into third position by 1982 largely because of price. The proportion might have been even higher if farmers had not adopted measures to reduce their energy costs. For example, in Western Canada 55% of farmers purchased larger and more efficient machinery since 1978; nationally, three out of 10 farmers increased vehicle and machinery maintenance to improve efficiency and reduce energy costs. Addition of insulation to farm buildings was another method adopted to conserve energy.

Fertilizer costs also increased as a proportion of total farm expenditures. They reached \$1 billion annually or 7% of total expenses, up to fourth largest from sixth. Nationally the amounts of fertilizer applied in 1982 were almost double those of 1972.

Expenditures for hired farm labour dropped since 1972 from being the third largest farm expenditure to the fifth. Wage rates and the number of hired workers both showed moderate growth but the rate of increase was not as high as in other expenditures. Many farmers appear to have substituted capital for labour. An example is the investment in machinery which in 1982 was about four and one-half times greater in value than in 1972. Almost 40% of that increase represents growth in the stock of new equipment, almost all of it larger, more efficient labour-saving machinery. The remaining 60% is the

Chart 9.4  
Energy expenditures on farms, 1981



result of prices which are measured by a Statistics Canada farm input price index.

9.6 Other federal services

9.6.1 Agriculture Canada

Responsibilities of the federal department cover three broad areas: research, promotional and regulatory services and assistance programs. Research aims at solving practical farm problems by applying scientific research to soil management, agricultural engineering, and crop and animal production. Promotional and regulatory services apply to market development, crop and livestock improvement, inspection and grading of agricultural products, control of insect pests and diseases of plants and livestock, and registration of pesticides and fertilizers. Assistance programs provide for price stabilization, compensation, and income security in the event of a crop failure.

9.6.2 Grains industry

Government involvement in the grains industry predates Confederation and is a record of policies relating to land use and settlement; transportation; grain storage, handling and forwarding; marketing methods and opportunities; income security; and the many ramifications of international competition and the search for international co-operation in the sale of

grain. The federal government's role in the grains industry is carried out by Agriculture Canada, External Affairs Canada and two semi-autonomous bodies which report to Parliament through federal ministers: the Canadian Grain Commission and the Canadian Wheat Board.

The Canadian International Grains Institute contributes to the maintenance and expansion of markets for Canadian grains and oilseeds and their products. The Canada Grains Council provides a forum for co-ordination, consultation and consensus on industry recommendations to government. Organized in 1970 the Grains Group represents the departments of agriculture, external affairs and transport. The group examines problems in production, transportation and handling, and marketing. It co-ordinates, reviews and recommends federal policies for the grains industry.

**Production.** Agriculture Canada conducts research in plant breeding and production methods to improve varieties, yields and quality of marketable grains. An annual feature has been the provision each March, well in advance of spring planting, of information on anticipated market conditions and on recommended seeded areas for grains in the coming crop year. These are announced by the minister responsible for the wheat board.

**Marketing.** The grain marketing office of the department of external affairs promotes sales and market development for grains, oilseeds and products, and maintains contact with the wheat board, other agencies concerned with grain marketing, trade commissioners abroad and the private trade sector. Trade promotion includes participation in missions and trade fairs abroad. The department also provides cost- or risk-sharing to projects, designed to increase sales of grains and other products, which would not be realized without incentives.

**Credit.** Canada has been selling grain on credit since 1952. Now all credit sales are on terms of three years or less. Credit sales of western wheat, barley and oats, marketed by the Canadian Wheat Board, are financed under the Canadian Wheat Board Act with a government guarantee of repayment. Credit sales of other grains are insured under the Export Development Act.

**Food aid.** The Canadian food aid program has expanded from \$2 million in 1962-63 to more than \$200 million. Most of the food sent to about 85 countries consists of wheat and wheat products; corn, canola/rapeseed and canola oil are also included. The Canadian International Development Agency administers 60% of Canada's food aid to foreign governments under multilateral programs, mainly the world food program and 40% through bilateral channels. Regular contributions of flour are made to the United Nations Relief and Works Agency. Canada's minimum annual grain and grain products aid commitment under the food aid convention of the International Wheat Council is 600 000 tonnes.

### 9.6.3 Canadian Grain Commission

This commission, established by the Canada Grain Act in 1971, has headquarters at Winnipeg and offices across Canada, the largest in Vancouver, Thunder Bay and Montréal.

The commission fixes maximum tariffs for charges by licensed elevators and establishes grain grading standards. All elevator operators in Western Canada and in Eastern Canada handling western-grown grain for export, and grain dealers in Western Canada, must be licensed by the commission. The commission provides official inspection, grading and weighing of grain, and registers terminal elevator and eastern elevator receipts. Its economics and statistics division is the basic source of information on grain handled through the Canadian licensed elevator system.

The commission also administers the Grain Futures Act which provides for supervision of grain futures trading. Its research laboratory surveys the quality of each year's grain crops and of grain moving through the system. It provides information on varieties and grades of grain to the inspection division, collaborates with plant breeders in studies

on new grain varieties and undertakes basic research on quality of cereal grains and oilseeds.

### 9.6.4 Canadian Wheat Board

Export sales of Prairie-grown wheat, oats and barley are negotiated by the Canadian Wheat Board, or through grain exporting companies acting as its agents.

This board was set up in 1935 as the sole marketing agency for Prairie wheat, and subsequently for oats and barley, sold interprovincially or internationally. Feed grains for domestic use were removed from exclusive wheat board marketing in 1974 and have since been traded on the open market. The wheat board remains the sole purchaser and seller of feed grains for export. Other crops, such as rye, rapeseed, flaxseed, buckwheat and mustard are marketed by the private grain trade.

The board's marketing program is accomplished in two stages. First, grain is delivered by the producer to the local elevator under a quota system to meet market commitments. The quota system allocates delivery opportunities among all grain producers. Second, the grain is moved by rail to large terminals in Eastern Canada, Thunder Bay, Churchill, and at the West Coast. Grain is also trans-shipped from Thunder Bay to eastern positions largely by lake vessels. The wheat board and the Grain Transportation Authority, another federal agency, jointly co-ordinate the movement of grain from country elevators to terminals on a weekly basis.

The producer receives payment in two stages. An initial price is established by order-in-council before the start of a crop year; this price, less handling costs at the local elevator and transportation costs to Thunder Bay or Vancouver, is in effect a government guaranteed floor price. If the wheat board, in selling the grain, does not realize this price plus necessary marketing costs, the deficit is borne by the federal treasury; after the end of the crop year when the board has disposed of all the grain it distributes any surplus in a final payment to producers.

Under the domestic feed grains policy, a producer delivering feed grains to a country elevator has the option of selling the grain to the wheat board or on the open market. In the latter case he will, on delivery, receive the full price in contrast to the wheat board system of initial and final payments. The wheat board offers feed grains to the domestic market at a price competitive with US corn.

**The Prairie Grain Advance Payments Act**, administered by the wheat board, provides that producers may receive through their elevator agents interest-free cash advances on farm-stored grain; pending delivery under the quotas established. An advance of up to \$45,000 (depending on the number of producers involved in the operation) may be issued to multi-farm operations, such as partnerships, co-operative and corporate farms. The maximum

total advance may not exceed \$15,000 for any individual for the crop year. The act also provides for special advance payments for unharvested grain and for drying of grain.

A new domestic pricing system for wheat was introduced in 1978. Wheat other than durum is sold to Canadian millers at world prices within the range of \$183.72 to \$257.20 a tonne. Canadian consumers are protected when world prices rise above the upper limit while producers are protected against low world prices by the minimum domestic price. For durum wheat there is a minimum selling price of \$183.72 a tonne but no maximum.

**Canadian International Grains Institute**, in the Canadian Grain Commission Building, Winnipeg, was incorporated in 1972, and is affiliated with the wheat board and the grain commission. Financial responsibility is shared by the federal government and the wheat board. The institute helps to maintain and enlarge markets at home and abroad for Canadian grains, oilseeds and their products. In its classrooms, conference rooms and laboratories it offers instructional programs to participants from countries purchasing these commodities and to Canadians associated with the grain industry. The institute includes an 8.16 tonne, 24-hour-capacity flour mill and a pilot bakery.

**Canada Grains Council** was established in 1969 to improve co-ordination on recommendations to government. It co-ordinates activities to increase Canada's share of world markets and efficient use in Canada of grains and grain products. Membership is open to all non-governmental organizations and associations whose members are engaged in grain production, processing, handling, transportation or marketing. Administrative costs are shared by federal government and industry members. The 29 member organizations represent thousands of individuals.

**Western grain stabilization administration**, Winnipeg, protects producers against: declines in world grain prices or in sales of Canadian grain, increases in cash costs of producing grain or any combination of those factors. The support given prevents the net cash flow from falling below the average net cash flow in the previous five years. The net cash flow is the difference between total receipts from the production and sale of cereals and oilseeds and the cash costs of production, in each calendar year.

Under this voluntary program, grain producers contribute a levy of 2% of their grain sales up to maximum sales of \$45,000 a year to the western grain stabilization fund. The federal government contributes an equal amount to double the contributions.

### 9.6.5 Canagrex

Canagrex is a federal Crown corporation established by an act of Parliament in June 1983 to assist agri-

cultural export expansion. Led by a team of professional, international, marketing and sales experts, Canagrex serves all sectors of the Canadian agri-food industry, including farmers, co-operatives, marketing boards, associations and Canadian companies. It may provide managerial, technological, marketing or other counselling and consulting services, assistance in promotion and marketing representation, in co-operation with other government services available to exporters. Canagrex is able to engage in state-to-state transactions, undertake joint ventures, make grants, contributions and loans, give guarantees and engage agents in Canada and abroad. The corporation will assist in purchasing, processing, storing, shipping, insuring, export selling or otherwise disposing of agricultural and food products. It does not deal in any dairy products handled by the Canadian Dairy Commission, grain handled by the Canadian Wheat Board, or fish products or byproducts as defined in the Fisheries Act. The head office of Canagrex is in Ottawa.

### 9.6.6 Farm assistance

Federal farm assistance programs help ensure stability of the agriculture industry and the supply of food for Canadians. Price-support programs help producers to secure a fair return for their labour and management, provide stability of income, and remain in business during times of depressed prices. Crop insurance, through programs operated provincially with the federal government contributing financially, provide farmers protection against crop losses caused by natural forces such as hail, drought and insects. Availability of credit is important for farmers to improve or expand their operations. Among other assistance programs are those for marketing and feed grain. The assistance programs, and the special measures that may be established to meet emergency conditions, are administered by Agriculture Canada or by the agencies responsible to the agriculture minister, except for programs carried out under the Prairie Grain Advance Payments Act, administered by the wheat board, and the Agriculture and Rural Development Act (ARDA) and the Prairie Farm Rehabilitation Act.

**The Farm Improvement Loans Act (1945)** is administered by Agriculture Canada. The government may guarantee loans by chartered banks and other designated lenders to farmers for a wide range of purposes. The maximum which a borrower may have outstanding is \$100,000. Loans may be repayable over a period up to 10 years for all purposes, except land purchase for which a 15-year term is permitted.

Farm improvement loans must be secured. Borrowers are required to provide a certain portion of the cost of a purchase or a project from their own resources. The maximum rate of interest on loans is based on the prime lending rate of the chartered banks, plus 1%.

**Agricultural Products Board** (1951) is empowered to buy, sell, or import agricultural products; to store, transport, and process such products; to sell agricultural products to any country and to make arrangements for their purchase and delivery; or to purchase agricultural products on behalf of any government or agency. The board can only sell products at a loss when specifically authorized by the Governor-in-Council. Programs may also be taken in support of market stabilization of agricultural commodities in lieu of action under the Agricultural Stabilization Act.

**Agricultural Stabilization Board** (1958) stabilizes prices of agricultural products to help the industry get fair returns for labour and investment, and to maintain a fair relationship between prices received by farmers and their costs of goods and services. Commodities included are slaughter cattle, hogs and sheep, industrial milk and cream, corn and soybeans, and oats and barley produced outside designated areas defined in the Canadian Wheat Board Act. The Governor-in-Council may designate other commodities for support. The board may stabilize the price of any product by offer to purchase, or by making deficiency payments for the benefit of producers. Stabilizing prices by means of assistance payments has helped balance production and demand.

The board's operations are financed by parliamentary appropriations for that purpose.

**The Crop Insurance Act** (1959) provides that the federal government helps the provinces in making all-risk crop insurance available to farmers on a shared-cost basis. Crop insurance can protect the farmer against unforeseen losses. Initiative for establishing crop insurance rests with the provinces. Programs are developed to meet provincial requirements. The federal government shares the risk by providing loans or reinsurance when indemnities greatly exceed premiums and reserves. Farmers pay 50% of total premiums required to make the programs self-sustaining. The remainder is contributed by the federal government if the province elects to pay all administrative costs. Otherwise the provincial and federal government share administrative costs and the remaining premium equally.

**Canadian Livestock Feed Board** (1966) is a Crown agency with four main objectives: availability of feed grain to meet the needs of livestock feeders, adequate storage space in Eastern Canada for feed grain needed by livestock feeders, a reasonably stable price of feed grain in Eastern Canada and in British Columbia, and fair equalization of feed grain prices in the domestic market.

The board may make payments related to the cost of feed grain storage and transportation, the latter payments having been made since 1941. Since April 1967 the freight subsidy has been administered by the Livestock Feed Board. Initially, it was applied

only to feed grains produced in the Prairie provinces and designated for domestic livestock consumption in Eastern Canada, British Columbia, and Yukon and Northwest Territories. It was extended to the movement of Ontario corn and wheat to the Atlantic provinces and Quebec.

The board monitors transportation costs for feed grain and protein ingredients and plays a major role in freight rate negotiations and freight rate structure in co-operation with farm organizations, trade associations and the railways. Members and staff of the board meet with producer associations and industry organizations to deal with problems of the feed grain-livestock sector of Canadian agriculture. Research activities focus primarily on economic aspects of animal feed production, utilization, feed grain marketing, transportation and current and potential problem areas.

**Farm Credit Corporation** administers the Farm Credit Act and the Farm Syndicates Credit Act. Lending decisions and operations are decentralized into seven regional offices, one for the Atlantic region and one for each of the other provinces. Field officers work out of 104 offices across Canada.

The Farm Credit Act, designed to meet long-term mortgage credit needs of Canadian farmers, provides two types of mortgage loans. Borrowers must be of legal age to enter into a mortgage agreement and loans are made only to Canadian citizens or permanent residents. All loans are repayable on an amortized basis within a period not exceeding 30 years.

The Farm Syndicates Credit Act authorizes loans to syndicates of three or more farmers for machinery, equipment or buildings. Loans can be made to syndicates to a maximum of \$100,000 or \$15,000 per qualifying member, whichever is the lesser. Loans are repayable over a period not exceeding 15 years for buildings and permanently installed equipment and seven years for mobile machinery.

**New crop development fund.** Agriculture Canada is helping the private sector and universities in their efforts to broaden Canada's agricultural base. The objective is to help stimulate the development and acceptance of new crops and varieties, new uses for crops grown in Canada, and new more efficient production methods. It plays a prominent role in bridging the gap between basic research and commercial production.

Examples of complete and ongoing projects financed in part by the fund can be found in all regions in Canada. For example, in British Columbia, a five-year project examined the introduction of German grape varieties in the Okanagan Valley. The University of Guelph in Ontario studied the feasibility of establishing a commercial peanut industry.

## 9.7 Provincial services

Provincial departments responsible for agriculture have regional offices and extension programs with qualified professional representatives working in rural centres to provide advice on farm management, farm labour, home design and home economics, education and development for 4-H and youth groups. Advice is available in veterinary services, livestock improvement and crop management.

Engineering services provide advice on rural water and sewer systems, farm machinery and such projects as irrigation and land drainage in the Prairies and in parts of Ontario.

Marketing activities are carried out to expand domestic and foreign markets and encourage increased food processing. Market development programs supplement those of the federal government.

In several provinces, loans and grants are available to farmers to enable them to upgrade or expand their operations. For example, in Newfoundland, grants may be used for land clearing, building, or buying farm equipment. Quebec provides a centre at St. Lambert for the artificial insemination of swine, a potato production centre at Manicouagan, a maple products centre at St. Norbert and beekeeping centres at Deschambault and Saint-Hyacinthe. Among the many services provided by Ontario are financial assistance programs for farmers, education and research programs at five colleges of agricultural technology, and veterinary laboratory services for livestock producers and veterinarians. The Prairie provinces all conduct substantial market development activities, and programs to assist farm families. In British Columbia, funding and advice are available to increase food processing capabilities.

## 9.8 Product and marketing controls

Numerous measures have been enacted by both federal and provincial governments over the years to encourage a productive agricultural sector. Originally emphasis was on production increases and control of pests and diseases. As production and farm specialization increased, problems in marketing began to emerge.

Grading procedures and standards were established to ensure quality but periodic price collapses were caused by bumper crops and intensified by the general inability of producers to bargain on an equitable basis with far fewer buyers.

Voluntary marketing co-operatives were organized to provide bargaining power to producers. All provinces eventually passed legislation for incorporating co-operatives, and most of them provided assistance. Federally, the Agricultural Products Co-operative Marketing Act provided financial guarantees to producers willing to market their crops

on a pooling-of-returns basis. More information on co-operative organizations is given in Chapter 17.

Co-operative marketing was initially successful, but the voluntary aspect was a weakness. In good times many members dropped out to make their own deals. Needed were marketing organizations with the legal power to control all producer output of certain products in certain areas. As a result, marketing control legislation was adopted providing for various types of boards, agencies and commissions.

### 9.8.1 Product standards

Federal and provincial departments of agriculture co-operate in enforcing quality standards for various foods. Agriculture Canada has some control over size and types of containers used and the consumer and corporate affairs department enforces regulations on weights and measures.

Standards related to health and sanitation in food handling are developed at all levels of government. Examples are provincial and municipal laws pertaining to milk pasteurization, slaughter house inspection and sanitary standards in restaurants. Federal inspection of all meat carcasses traded interprovincially is required by the agriculture department; the health and welfare department has wide responsibility for food composition standards; and the consumer and corporate affairs department has jurisdiction over advertising.

### 9.8.2 Marketing controls

The Agricultural Products Co-operative Marketing Act (RSC 1970, c.A-6) was passed in 1939 to assist orderly marketing by encouraging establishment of pools for selling the product at the optimal time of year to give the producer the maximum sales return for his product.

The act aids farmers by guaranteeing initial payments and processing costs. The government may undertake to guarantee a certain minimum initial payment to the producer at the time of delivery of the product, including a margin for handling selling and processing; sales returns are made to the producer on a co-operative plan. Amount of the initial payment is set at the discretion of the minister of agriculture taking into account current and estimated market prices. This act has enabled many farmers to market their crops at a fair return in an organized and systematic manner. All agricultural products, except wheat produced in the area under Canadian Wheat Board jurisdiction are eligible for such marketing assistance.

**The Canadian Dairy Commission**, established in 1966, was the first new national marketing agency since the Canadian Wheat Board was created in 1935. The commission has the power to stabilize the market by offering to buy major dairy products, butter and skim milk powder, at fixed prices and to package, process, store, ship, insure, import, export or sell or otherwise dispose of these and other dairy

products purchased by it. The commission may also pay subsidies to producers of manufacturing milk and cream. These payments supplement market returns to producers and keep consumer prices at reasonable levels. A producer is eligible for subsidy on shipments covered by his market share quota. The commission administers an account to cover the cost of export marketing of dairy products. Money for this is collected by levies from producers in all provinces except Newfoundland under a market-sharing quota program.

A comprehensive milk marketing plan, to balance demand and supply and to generate funds for export assistance, was agreed to by the Canadian Dairy Commission and the milk marketing agencies of Ontario and Quebec in January 1971, establishing a market-sharing quota (MSQ) system for industrial milk and cream and that portion of milk, shipped by fluid producers, which is used for manufacturing purposes. Cream shippers in Quebec, Ontario and Prince Edward Island entered the plan in 1971. Producers in other provinces came under the program in the next three years. The arrangement now applies to all manufacturing milk and cream sold in Canada and provides that each producer receives returns related to the target support price for manufacturing shipments up to his market share. The target support price is achieved through the offer-to-purchase program which stabilizes markets, plus direct payments to producers. Producer returns for deliveries over market share are related to world prices for surplus dairy products.

**Producer marketing boards** were introduced during the 1930s to give agricultural producers legal authority under certain conditions to control marketing of their produce. The Natural Products Marketing Act of 1934 attempted to provide this power at the federal level but the courts ruled that the subject was outside federal jurisdiction. Subsequently the Natural Products Marketing (British Columbia) Act, 1936 was found to be within the powers of provincial governments and it has since been used as a model for marketing board legislation in all provinces.

The basic feature which enables marketing boards to control marketing is the compulsory aspect. A new board usually has to be approved by a majority vote of the producers of the product. Then all producers in the designated area are required by law to market their produce under authority of the board. A board's powers may involve negotiating a minimum price or may include setting production or marketing quotas, designating times and places for marketing, or carrying out other duties which may be considered necessary to ensure an orderly and equitable market.

The powers of a producer marketing board set up by provincial legislation are limited to trade within the province. The Agricultural Products Marketing Act (RSC 1970, c.A-7), passed in 1949, allows the

federal government to delegate powers to a marketing board for interprovincial and export trade, similar to those it holds under provincial authority with respect to intraprovincial trade. This act gives the Governor-in-Council the right to authorize a provincial marketing board to impose and collect levies from persons producing and marketing the specific commodities so the board can create reserves and equalize returns.

Creation of national marketing agencies or boards was enabled by the federal Farm Products Marketing Agencies Act in January 1972. National agencies may be set up, when producers and provincial authorities desire it, for agricultural commodities which, owing to widespread production in Canada or for other reasons, cannot be effectively marketed under individual provincial boards.

**The National Farm Products Marketing Council (NFPMC)**, established by the Farm Products Marketing Agencies Act in 1972, advises the agriculture minister on all matters relating to marketing agencies. It works with the agencies and provincial governments to promote more effective marketing of the regulated products in interprovincial and export trade. There are agencies for eggs, turkeys and chickens, and a regional agency for potatoes in Eastern Canada has been considered. Membership of the council includes producer, consumer, labour and agribusiness representatives.

## 9.9 Agricultural education

All regions of Canada have universities and colleges giving undergraduate and postgraduate programs in agricultural science and home economics. Ontario, Quebec and Saskatchewan have degree-granting veterinary colleges.

In the Atlantic provinces, the Nova Scotia Agricultural College now has degree-granting status and also provides the first two years in agricultural engineering with the final two years provided by other faculties in Eastern Canada. The college offers several technical programs associated with farming and agribusiness and a variety of vocational courses designed to update farmers and other industry personnel.

In Quebec, McGill and Laval universities offer undergraduate and postgraduate programs in agricultural science. The veterinary faculty of the University of Montréal grants degrees. The education department offers a course in farm management and operation at four CEGEPs, courses are offered at Ste-Croix school of agriculture, and 15 school boards provide vocational training in agriculture at the secondary level. The Quebec agriculture, fisheries and food department also operates two institutes of agricultural technology.

In Ontario the education, research and special services division of the Ontario agriculture and food

ministry has five diploma-course programs at the Ontario Agricultural College, University of Guelph, and at the colleges of agricultural technology at Centralia, Kemptville, New Liskeard and Ridgeway.

The faculty of agriculture, University of Manitoba, offers a four-year course leading to a Bachelor of Science in agriculture and a two-year course leading to a diploma in agriculture. The university also has an extensive program for graduate studies in agricultural sciences.

At the University of Saskatchewan, Saskatoon, colleges of agriculture and veterinary medicine are degree-granting institutions providing undergraduate and postgraduate training. A school of agriculture offers a two-year diploma course providing basic training for young people wishing to farm or work with related industries. A two-year farm machinery mechanics course is offered at Kelsey Institute, Saskatoon for trainees for the farm machinery service industry. Numerous agricultural courses of less than 20 weeks duration are offered throughout the province by three technical institutes and 15 regional community colleges. High schools offer an elective course, Saskatchewan studies — agriculture, which is also available to residents of the province through the provincial government's correspondence school.

Alberta has three agricultural colleges, Fairview, Olds and Lakeland (Vermilion campus), offering a broad range of diploma programs. Under the module approach in courses students may enter credit programs at a variety of times and locations. Non-credit short courses focus on specific agricultural

activities. In addition, Lethbridge Community College offers a limited range of agricultural programs and courses.

A green certificate program, with on-the-job and classroom training for farm hands and farm managers, is a joint project of farmers, Alberta departments of agriculture and advanced education, the three agricultural colleges and Lethbridge Community College.

Several unusual college programs such as turfgrass management and floriculture attract students from other provinces. The colleges participate in interprovincial and international agricultural education under exchange and world youth programs. Curricula have been expanded to meet both manpower needs and diversified interests of rural communities.

Public and private colleges in Alberta offer one or two years of university-transfer courses applicable toward degree programs in agriculture and veterinary medicine.

The University of British Columbia offers courses in agricultural specialties leading to a four-year bachelor of science degree in agriculture, and a graduate studies program. Fraser Valley College at Abbotsford has a 30-week vocational animal production course and a 15-week agricultural marketing or crop production course. The British Columbia Institute of Technology conducts two-year agricultural courses in four study areas: food processing, food production, agri-management, and landscape horticulture. Several other colleges offer individual agriculture-related courses.

## Sources

9.1 Author: David Kirk.

9.2 Authors: Phillip Ehrensaft, Ray Bollman.

9.3 Communications Branch, Agriculture Canada; Grain Transportation and Handling, Transport Canada.

9.4 - 9.5 Agriculture Statistics Division, Statistics Canada. Co-ordinated by May Holbein.

9.6 Communications Branch, Agriculture Canada; Grain Marketing Office, Department of External Affairs; Canadian Grain Commission; Canadian Wheat Board; Canagrex; Canadian Livestock Feed Board; Farm Credit Corporation.

9.7 Supplied by respective provincial agriculture departments.

9.8 Marketing Improvement Division, Agriculture Canada; Canadian Dairy Commission; National Farm Products Marketing Council.

9.9 Supplied by respective provincial agriculture departments.

## Selected references

*A profile of Canadian agriculture.* Statistics Canada 96-920, Ottawa, 1984.

*1981 Census of Agriculture: Canada.* Statistics Canada 96-901, Ottawa, 1982.

*Cereals and oilseeds review.* Statistics Canada 22-007, Ottawa, 1984.

*Farm energy use.* 1981. Statistics Canada 21-519 (occasional), Ottawa, 1983.

*Farm input price index,* fourth quarter 1983. Statistics Canada 62-004, Ottawa, 1984.

*Farm net income.* 1981. Statistics Canada 21-202 (annual), Ottawa, 1983.

*Field crop reporting series.* Statistics Canada 22-002 (seasonal), Ottawa, 1984.

*Grain trade of Canada,* 1982. Statistics Canada 22-201 (annual), Ottawa, 1983.

*Index numbers of farm prices of agricultural products,* December 1983. Statistics Canada 62-003, Ottawa, 1984.

*Livestock and animal products statistics,* 1982. Statistics Canada 23-203 (annual), Ottawa, 1983.

*Report on livestock surveys.* Statistics Canada 23-008 (quarterly), Ottawa, 1984.

*Wool production and supply.* Statistics Canada 23-205 (annual), Ottawa, 1984.

# TABLES

.. not available  
 ... not appropriate or not applicable  
 — nil or zero  
 -- too small to be expressed  
 e estimate  
 p preliminary  
 r revised

Equivalent values of metric units,  
 1 hectare (ha) = 2.47 acres  
 1 metric tonne (t) wheat = 36.744 bu  
 oats = 64.842 bu  
 barley = 45.930 bu  
 certain tables may not add due to rounding

Agriculture Statistics Division tables comprise data available as of June 1983 and are subject to revision. Revised data may be obtained by contacting the division.

## 9.1 Cash receipts from farming operations (excluding supplementary payments), by province (thousand dollars)

Province	1977 <sup>c</sup>	1978	1979	1980	1981 <sup>1</sup>	1982 <sup>1</sup>
Newfoundland					32,320	35,323
Prince Edward Island	91,039	101,066	121,439	139,199	190,142	163,001
Nova Scotia	133,373	156,609	174,571	198,791	226,442	235,140
New Brunswick	109,814	123,104	136,713	150,026	198,578	194,524
Quebec	1,422,497	1,716,886	1,975,910	2,252,618	2,763,440	2,895,837
Ontario	2,865,736	3,417,018	4,032,472	4,405,197	4,989,765	4,976,413
Manitoba	899,282	1,132,132	1,308,352	1,463,599	1,665,170	1,684,957
Saskatchewan	2,163,204	2,500,168	3,033,132	3,301,694	4,018,371	3,921,525
Alberta	1,989,243	2,286,876	2,823,508	3,148,221	3,873,837	3,813,926
British Columbia	516,157	582,788	652,263	749,695	877,228	918,859
Canada	10,190,345	12,016,647	14,258,360	15,809,040	18,835,293	18,839,505

<sup>1</sup>Includes Newfoundland.

## 9.2 Cash receipts from farming operations, by commodity or other source (thousand dollars)

Item	1978	1979	1980	1981 <sup>2</sup>	1982 <sup>2</sup>
Wheat	1,674,722	1,908,385	2,763,481	3,275,045	3,496,577
Wheat, Canadian Wheat Board payments	126,910	452,426	433,073	1,156,424	463,701
Oats	47,664	34,898	50,364	60,194	53,595
Oats, Canadian Wheat Board payments	5,258	—	442	—	575
Barley	398,221	493,844	546,527	810,090	791,542
Barley, Canadian Wheat Board payments	84,798	47,361	45,938	116,612	111,564
Western Grain Stabilization Act <sup>1</sup>	115,000	253,000	—	—	—
Crop insurance	75,615	200,869	261,857	172,173	217,447
Canadian Wheat Board cash advances	136,820	130,664	60,494	318,556	305,827
Canadian Wheat Board cash advance repayments	-119,154	-172,252	-80,534	-199,651	-303,064
Deferred grain receipts	-350,237	-405,571	-648,300	-823,521	-706,474
Liquidation of deferred grain receipts	434,034	350,237	405,571	648,300	823,521
Rye	22,240	38,582	81,565	75,892	54,092
Flaxseed	98,633	143,612	188,289	129,854	106,012
Rapeseed	582,071	780,968	673,497	597,654	583,561
Soybeans	152,783	128,787	197,987	163,810	192,682
Corn	197,031	227,527	371,754	468,032	399,874
Sugar beets	30,561	34,066	73,465	63,136	28,177
Potatoes	151,818	160,051	203,533	316,317	251,405
Fruits	207,208	219,748	226,528	233,077	264,538
Vegetables	281,833	313,384	345,811	405,465	438,973
Horticulture and nursery	201,087	237,775	262,378	296,545	307,068
Tobacco	267,518	289,736	213,906	380,424	376,787
Other crops	224,167	260,606	309,838	452,005	285,944
Total crops	5,046,601	6,128,703	6,987,464	9,116,433	8,543,924
Cattle and calves	2,868,790	3,511,962	3,663,279	3,536,614	3,586,368
Pigs	1,155,784	1,302,660	1,402,535	1,614,540	1,957,341
Sheep and lambs	14,862	20,907	24,509	23,529	27,550
Dairy products	1,559,559	1,753,866	2,064,940	2,378,917	2,640,305
Poultry	536,750	653,491	663,013	777,032	773,639
Eggs	303,492	339,571	395,007	479,023	462,696
Other livestock and products	139,929	150,810	172,522	173,040	178,325
Total livestock	6,579,166	7,733,267	8,385,805	8,982,695	9,626,224
Forest and maple products	63,532	84,032	83,955	106,130	98,979

## 9.2 Cash receipts from farming operations, by commodity or other source (thousand dollars) (concluded)

Item	1978	1979	1980	1981 <sup>2</sup>	1982 <sup>2</sup>
Dairy supplementary payments	253,117	246,116	255,113	281,132	24,994
Deficiency payments	42,612	56,581	40,161	132,227	24,994
Provincial income stabilization program	31,619	9,661	25,470	60,104	102,930
Total, cash receipts (excl. supplementary payments)	12,016,647	14,258,360	15,777,968	18,678,721	18,671,489
Supplementary payments	—	—	31,072	156,572	168,016
Total, cash receipts	12,016,647	14,258,360	15,809,040	18,835,293	18,839,505

<sup>1</sup>Subsidy started in 1978.

<sup>2</sup>Includes Newfoundland.

## 9.3 Net income of farm operators from farming operations<sup>1</sup>, by item and province (thousand dollars)

Item and province	1978	1979	1980	1981	1982 <sup>P</sup>
ITEM					
1. Cash receipts from farming operations	12,040,080	14,284,943	15,805,676	18,678,721	18,671,489
2. Income in kind	215,733	261,135	258,527	241,951	249,655
3. Supplementary payments	52	85	31,132	156,572	168,016
4. Realized gross income (1 + 2 + 3)	12,255,865	14,546,163	16,095,335	19,077,244	19,080,160
5. Operating and depreciation charges	9,116,518	10,994,529	12,696,125	15,016,194	15,567,731
6. Realized net income (4 - 5)	3,139,347	3,551,634	3,399,210	4,061,050	3,512,429
7. Value of inventory changes	189,476	1,779	-237,125	665,072	293,641
8. Total gross income (4 + 7)	12,445,341	14,547,942	15,858,210	19,742,316	19,373,801
Total net income (8 - 5)	3,328,823	3,553,413	3,162,085	4,726,122	3,806,070
PROVINCE					
Newfoundland	8,809	8,379	4,741	4,952	7,452
Prince Edward Island	26,213	37,015	31,373	93,973	28,513
Nova Scotia	50,608	50,275	55,812	48,781	53,745
New Brunswick	38,829	43,624	32,289	64,431	42,534
Quebec	530,847	600,612	522,693	694,335	662,560
Ontario	660,135	831,000	800,070	840,097	822,079
Manitoba	340,044	226,683	59,729	445,241	333,501
Saskatchewan	898,116	813,139	663,183	1,627,488	1,180,673
Alberta	638,764	764,108	795,436	824,047	531,879
British Columbia	136,458	178,578	166,759	82,777	143,134

<sup>1</sup>Includes estimated value of farm homes supplementary payments made under the provisions of the Prairie Farm Assistance Act and payments under the Western Grain Producers Acreage Payment Regulations.

## 9.4 Harvested area and production of field crops, by province

Field crop and province	Area ('000 ha)				Production ('000 t)			
	1979	1980	1981	1982	1979	1980	1981	1982
WHEAT	10 552	11 210	12 427	12 595	17 190	19 292	24 803	27 620
Prince Edward Island	4	5	3	3	13	12	9	9
Nova Scotia	2	3	3	2	5	7	9	7
New Brunswick	4	4	4	3	9	9	10	9
Quebec	34	43	41	32	100	125	120	93
Ontario	208	203	213	130	712	735	733	379
Winter	198	194	204	121	688	712	709	353
Spring	10	9	9	9	24	23	24	24
Manitoba	1 214	1 336	1 578	1 619	2 041	1 905	3 326	3 728
Saskatchewan	6 919	7 122	7 831	7 973	10 206	10 940	14 288	17 146
Alberta	2 105	2 429	2 711	2 772	4 028	5 389	6 221	6 137
British Columbia	32	65	43	61	82	170	87	114
OATS	1 492	1 451	1 561	1 652	2 879	2 912	3 188	3 776
Prince Edward Island	18	15	13	13	38	30	29	31
Nova Scotia	6	6	7	7	10	13	14	16
New Brunswick	15	16	15	16	28	24	31	31
Quebec	180	165	150	163	339	279	266	310
Ontario	160	154	134	150	347	346	270	347
Manitoba	182	182	243	243	308	278	463	571

## 9.4 Harvested area and production of field crops, by province (continued)

Field crop and province	Area ('000 ha)				Production ('000 t)			
	1979	1980	1981	1982	1979	1980	1981	1982
Saskatchewan	405	364	445	465	632	617	817	1 002
Alberta	506	526	526	567	1 126	1 265	1 249	1 403
British Columbia	20	23	28	28	51	60	-49	65
BARLEY	3 730	4 687	5 476	5 189	8 478	11 395	13 724	14 074
Prince Edward Island	17	21	21	19	50	50	60	60
Nova Scotia	2	2	4	4	6	6	9	10
New Brunswick	4	3	4	5	9	6	10	13
Quebec	40	66	106	121	105	172	257	360
Ontario	134	164	190	235	410	511	584	749
Manitoba	587	809	951	809	1 263	1 568	2 330	2 373
Saskatchewan	1 052	1 315	1 497	1 396	1 960	2 787	3 331	3 636
Alberta	1 841	2 226	2 610	2 509	4 550	6 075	6 967	6 684
British Columbia	53	81	93	91	126	220	176	189
FALL RYE	314	290	398	386	503	422	832	975
Nova Scotia	—	—	2	2	—	—	6	5
Quebec	4	4	3	4	7	5	4	5
Ontario	27	32	36	38	56	75	84	84
Manitoba	50	60	74	78	79	74	170	178
Saskatchewan	136	101	178	162	190	96	292	318
Alberta	93	89	101	97	163	163	269	198
British Columbia	4	4	4	5	8	9	7	7
SPRING RYE	18	23	46	53	27	32	94	93
Manitoba	1	1	2	3	1	1	5	5
Saskatchewan	10	10	24	26	13	11	38	45
Alberta	8	12	20	24	13	20	51	43
ALL RYE	332	313	444	439	530	455	926	888
Nova Scotia	—	—	2	2	—	—	6	5
Quebec	4	4	3	4	7	5	4	5
Ontario	27	32	36	38	56	75	84	84
Manitoba	50	61	76	81	80	75	175	183
Saskatchewan	146	111	202	188	203	108	330	363
Alberta	101	101	121	121	176	183	320	241
British Columbia	4	4	4	5	8	9	7	7
PEAS	43	49	59	69	78	76	111	135
Manitoba	28	34	40	44	52	49	79	82
Saskatchewan	12	12	16	20	19	19	22	38
Alberta	3	3	3	5	7	8	10	15
BEANS	34	38	44	44	62	70	65	73
Ontario	34	38	44	44	62	70	65	73
SOYBEANS	279	277	279	364	657	690	607	857
Ontario	279	277	279	364	657	690	607	857
BUCKWHEAT	66	47	57	55	36	25	53	29
Quebec	7	7	6	9	9	8	7	7
Ontario	4	—	—	—	5	—	—	—
Manitoba	55	40	51	46	22	17	46	22
MIXED GRAINS	593	569	545	532	1 559	1 511	1 459	1 483
Prince Edward Island	31	32	34	36	82	83	101	111
Nova Scotia	3	2	2	2	6	7	6	7
New Brunswick	2	2	2	2	5	4	5	4
Quebec	45	50	51	54	115	126	130	144
Ontario	316	320	318	300	892	917	885	859
Manitoba	57	49	49	49	120	88	110	131
Saskatchewan	36	40	26	26	67	76	55	61
Alberta	101	73	61	61	265	204	163	163
British Columbia	2	1	2	2	4	3	4	3
FLAXSEED	931	555	465	627	815	442	468	747
Manitoba	506	324	283	364	444	211	262	437
Saskatchewan	324	162	142	202	259	147	150	234
Alberta	101	69	40	61	112	84	56	76
RAPESEED	3 406	2 080	1 492	1 717	3 410	2 484	1 837	2 114
Manitoba	546	324	243	344	567	295	306	401
Saskatchewan	1 335	809	546	567	1 281	998	748	726
Alberta	1 416	890	587	749	1 440	1 134	760	930
British Columbia	109	57	26	57	122	57	23	57
SUNFLOWER SEED	161	136	116	77	218	166	165	94
Manitoba	154	129	109	71	209	159	159	87
Saskatchewan	7	7	7	6	9	7	6	7

9.4 Harvested area and production of field crops, by province (concluded)

Field crop and province	Area ('000 ha)				Production ('000 t)			
	1979	1980	1981	1982	1979	1980	1981	1982
MUSTARD SEED	64	93	89	66	51	90	98	80
Manitoba	10	18	18	10	10	16	19	11
Saskatchewan	40	55	53	36	27	49	54	42
Alberta	14	20	18	20	14	25	25	27
SHELLED CORN	953	1 022	1 139	1 103	5 276	5 752	6 673	6 383
Quebec	125	154	165	175	701	838	975	910
Ontario	773	809	878	842	4 366	4 710	5 236	5 195
Manitoba	53	57	91	81	198	190	432	254
Alberta	2	2	5	5	11	14	30	24
POTATOES	113	106	111	113	2 752	2 471	2 683	2 751
Newfoundland	1	1	1	1	6	4	6	4
Prince Edward Island	25	23	26	28	689	591	734	782
Nova Scotia	2	2	2	2	32	33	34	40
New Brunswick	23	21	22	22	590	526	601	581
Quebec	18	17	17	18	415	358	342	387
Ontario	18	17	16	16	418	366	390	385
Manitoba	15	16	17	16	282	286	312	263
Saskatchewan	7	1	1	1	19	20	18	22
Alberta	7	6	7	7	177	189	172	192
British Columbia	4	4	4	4	124	98	75	94
TAME HAY	5 447	5 263	5 108	5 108	26 169	23 168	24 990	24 355
Prince Edward Island	55	53	50	51	249	267	236	238
Nova Scotia	73	72	71	71	377	357	383	431
New Brunswick	71	70	69	70	327	325	326	304
Quebec	1 029	993	966	967	4 994	4 692	4 936	4 300
Ontario	1 133	1 085	1 052	1 028	7 112	7 294	7 044	6 925
Manitoba	546	526	506	506	2 359	1 361	2 268	2 268
Saskatchewan	809	769	688	708	2 722	1 270	1 905	2 722
Alberta	1 460	1 416	1 416	1 416	6 260	5 715	6 078	5 534
British Columbia	271	279	290	291	1 769	1 887	1 814	1 633
FODDER CORN	453	440	394	399	13 650	12 806	12 099	11 248
Prince Edward Island	3	3	2	2	103	76	83	83
Nova Scotia	4	4	3	4	119	109	98	118
New Brunswick	2	2	2	2	69	58	54	47
Quebec	91	90	84	87	3 035	2 875	2 877	2 600
Ontario	312	287	261	251	9 081	8 373	7 772	7 026
Manitoba	18	30	20	31	327	381	354	481
Alberta	11	12	10	10	417	435	426	408
British Columbia	11	12	12	12	499	499	435	485
SUGAR BEETS	24	27	29	28	855	882	1 215	1 041
Quebec	2	3	4	5	105	122	160	200
Manitoba	9	10	11	11	250	235	340	372
Alberta	13	14	14	12	500	525	715	469

<sup>1</sup>Less than 500 hectares.

9.5 Harvested area and production of grain in the Prairie provinces

Grain	1977 <sup>t</sup>	1978 <sup>t</sup>	1979	1980	1981	1982
HARVESTED AREA ('000 ha)						
Wheat	9 789	10 365	10 238	10 887	12 120	12 364
Oats	1 679	1 377	1 093	1 072	1 214	1 275
Barley	4 514	4 002	3 480	4 350	5 058	4 714
Rye	227	293	298	273	400	390
Flaxseed	598	526	931	555	466	627
Rapeseed	1 416	2 752	3 297	2 023	1 376	1 660
PRODUCTION ('000 t)						
Wheat	18 833	20 575	16 275	18 234	23 835	27 011
Oats	3 516	2 745	2 066	2 159	2 529	2 976
Barley	11 213	9 732	7 773	10 430	12 628	12 693
Rye	363	559	458	366	825	787
Flaxseed	653	572	815	442	468	747
Rapeseed	1 934	3 436	3 289	2 427	1 814	2 057

### 9.6 Carryover of Canadian grain, 10-year average 1970-79 and crop years ended July 31, 1977-82 (thousand tonnes)

Grain and year	Total in Canada	In commercial storage in Canada	On farms in Canada	Prairie provinces	
				On farms	In primary elevators
Wheat					
Av. 1970-79	13 971.4	7 605.7	6 365.7	6 256.8	4 079.0
1977 <sup>r</sup>	13 318.1	6 160.5	7 157.6	7 076.1	2 526.3
1978 <sup>r</sup>	12 115.2	7 107.7	5 007.5	4 898.8	4 178.5
1979 <sup>r</sup>	14 910.7	5 956.9	8 953.8	8 817.8	3 564.0
1980	10 720.9	6 448.2	4 272.7	4 136.8	3 602.3
1981	8 570.2	6 925.2	1 645.0	1 525.0	3 642.9
1982	9 757.8	6 152.8	3 605.0	3 510.0	2 913.6
Oats					
Av. 1970-79	1 535.3	368.4	1 166.9	945.4	245.5
1977 <sup>r</sup>	1 327.8	294.6	1 033.2	848.2	162.7
1978 <sup>r</sup>	1 674.4	471.5	1 202.9	1 002.5	362.6
1979 <sup>r</sup>	1 520.0	417.4	1 102.6	848.2	351.5
1980	890.5	188.8	701.7	478.1	111.1
1981	759.6	149.6	610.0	430.0	87.7
1982	855.4	215.4	640.0	520.0	114.6
Barley					
Av. 1970-79	4 047.4	2 138.7	1 908.7	1 765.0	1 198.0
1977 <sup>r</sup>	3 218.3	2 086.1	1 132.2	1 045.1	1 334.7
1978 <sup>r</sup>	5 208.3	2 094.9	3 113.4	2 932.2	1 315.3
1979 <sup>r</sup>	4 895.1	1 694.6	3 200.5	3 048.1	825.1
1980	2 005.5	906.0	1 099.5	958.0	456.8
1981	3 203.2	2 063.2	1 140.0	960.0	1 058.3
1982	4 161.3	2 181.3	1 980.0	1 790.0	1 008.4
Rye					
Av. 1970-79	331.8	225.1	106.7	106.7	137.9
1977 <sup>r</sup>	341.9	288.6	53.3	53.3	175.1
1978 <sup>r</sup>	275.6	212.1	63.5	63.5	164.5
1979 <sup>r</sup>	501.7	247.7	254.0	254.0	178.3
1980	405.5	278.5	127.0	127.0	219.2
1981	222.1	169.1	53.0	53.0	107.4
1982	329.5	230.5	99.0	99.0	186.2
Flaxseed					
Av. 1970-79	326.2	242.5	83.7	83.7	138.0
1977 <sup>r</sup>	211.7	186.3	25.4	25.4	115.1
1978 <sup>r</sup>	470.7	366.6	104.1	104.1	251.3
1979 <sup>r</sup>	391.6	244.3	147.3	147.3	179.4
1980	587.3	440.0	147.3	147.3	286.9
1981	344.0	288.0	56.0	56.0	187.8
1982	262.4	221.4	41.0	41.0	135.1
Rapeseed					
Av. 1970-79	511.3	393.0	118.3	117.8	217.5
1977 <sup>r</sup>	199.2	174.3	24.9	24.9	81.4
1978 <sup>r</sup>	324.7	290.7	34.0	34.0	157.9
1979 <sup>r</sup>	1 068.1	818.6	249.5	247.2	425.4
1980	1 476.9	1 136.7	340.2	333.4	612.5
1981	1 327.9	923.9	404.0	397.0	473.3
1982	692.4	621.4	71.0	71.0	291.3

### 9.7 Lake shipments of Canadian grain and oilseeds from Thunder Bay, navigation seasons 1979-81 (tonnes)

Year and item	To Canadian ports	To US ports	To overseas ports	Total shipments
1979				
Wheat <sup>1</sup>	7 247 944	—	46 421	7 294 365
Oats	203 965	—	7 631	211 596
Barley	3 115 160	34 185	121 903	3 271 248
Rye	36 263	—	97 645	133 908
Flaxseed	80 293	—	232 829	313 122
Rapeseed	139 230	—	294 713	433 943
Total <sup>2</sup>	10 822 855	34 185	801 142	11 658 182
1980				
Wheat <sup>1</sup>	10 861 872	—	380 118	11 241 990
Oats	189 832	—	109 223	299 055
Barley	1 443 958	—	84 245	1 528 203
Rye	40 746	—	315 158	355 904
Flaxseed	55 619	—	187 322	242 941

9.7 Lake shipments of Canadian grain and oilseeds from Thunder Bay, navigation seasons 1979-81 (tonnes) (concluded)

Year and item	To Canadian ports	To US ports	To overseas ports	Total shipments
Rapeseed	46 053	—	126 060	172 113
Total <sup>2</sup>	12 638 080	—	1 202 126	13 840 206
1981				
Wheat <sup>1</sup>	9 472 214	—	198 235	9 670 449
Oats	179 212	—	—	179 212
Barley	2 342 502	13 117	71 344	2 426 963
Rye	98 137	—	191 362	289 499
Flaxseed	39 450	—	253 122	292 572
Rapeseed	56 376	—	125 137	181 513
Total <sup>2</sup>	12 187 891	13 117	839 200	13 040 208

<sup>1</sup>Includes durum.  
<sup>2</sup>Does not include mustard seed and corn.

9.8 Supply and disposition of Canadian grain, crop years ended July 31, 1980-82 (thousand tonnes)

Item	Wheat	Oats	Barley	Rye	Flaxseed	Rapeseed
CROP YEAR 1979-80						
Carryover, Aug. 1, 1979	14 910.7	1 520.0	4 895.1	501.7	391.6	1 068.1
Production in 1979	17 196.0	2 878.8	8 478.2	529.9	815.4	3 411.1
Imports	—	14.8	20.0	—	0.2	—
Total, supply	32 106.7	4 413.6	13 393.3	1 031.6	1 207.2	4 479.2
Exports <sup>1</sup>	15 888.4	103.1	4 147.0	396.6	448.8	1 742.8
Domestic use <sup>2</sup>	5 497.4	3 420.0	7 240.8	229.5	171.1	1 259.5
Total, disposition	32 106.7	4 413.6	13 393.3	1 031.6	1 207.2	4 479.2
Carryover, July 31, 1980	10 720.9	890.5	2 005.5	405.5	587.3	1 476.9
CROP YEAR 1980-81						
Carryover, Aug. 1, 1980	10 720.9	890.5	2 005.5	405.5	587.3	1 476.9
Production in 1980	19 292.1	2 911.4	11 394.3	454.8	441.8	2 483.4
Imports	—	33.0	9.0	30.0	0.3	—
Total, supply	30 013.0	3 834.9	13 408.8	890.3	1 029.4	3 960.3
Exports <sup>1</sup>	16 262.2	45.8	3 549.6	445.9	564.6	1 372.2
Domestic use <sup>2</sup>	5 180.6	3 029.5	6 656.0	222.3	120.8	1 260.2
Total, disposition	30 013.0	3 834.9	13 408.8	890.3	1 029.4	3 960.3
Carryover, July 31, 1981	8 570.2	759.6	3 203.2	222.1	344.0	1 327.9
CROP YEAR 1981-82						
Carryover, Aug. 1, 1981	8 570.2	759.6	3 203.2	222.1	344.0	1 327.9
Production in 1981	24 802.5	3 188.4	13 724.2	927.2	468.0	1 836.7
Imports	—	12.0	1.5	—	—	—
Total, supply	33 372.7	3 960.0	16 928.9	1 149.3	812.0	3 164.6
Exports <sup>1</sup>	18 446.8	50.6	6 011.5	561.1	447.7	1 359.3
Domestic use <sup>2</sup>	5 168.1	3 054.0	6 756.1	258.7	101.9	1 112.9
Total, disposition	33 372.7	3 960.0	16 928.9	1 149.3	812.0	3 164.6
Carryover, July 31, 1982	9 757.8	855.4	4 161.3	329.5	262.4	692.4

<sup>1</sup>Includes seed wheat, wheat flour in terms of wheat, seed oats, rolled oats and oatmeal in terms of oats, and malt in terms of barley.  
<sup>2</sup>Includes human food, seed requirements, industrial use, loss in handling and animal feed.

9.9 Licensed grain and oilseed storage capacity and grain in store, crop years 1979-80

Grain storage position	Licensed storage capacity	Canadian grain <sup>1</sup> in licensed storage				Proportion of licensed storage capacity occupied		
	Aug. 1, 1979 '000 t	July 31, 1979 '000 t	April 2, 1980 '000 t	July 31, 1980 '000 t		July 31, 1979 %	April 2, 1980 %	July 31, 1980 %
Primary elevators	9 053	5 524	4 937	5 289		61.0	54.5	58.4
Process elevators	581	205	195	241		35.3	33.6	41.5
Terminal <sup>2</sup>	3 587	1 437	1 728	1 558		40.1	48.2	43.4
Other <sup>2</sup>	3 527	1 055	921	1 112		29.9	26.1	31.5
Total <sup>4</sup>	16 748	8 221	7 781	8 200		49.1	46.5	49.0

### 9.9 Licensed grain and oilseed storage capacity and grain in store, crop years 1979-80 (concluded)

(concluded)

Grain storage position	Licensed storage capacity	Canadian grain <sup>1</sup> in licensed storage			Proportion of licensed storage capacity occupied		
		Aug. 1, 1980 '000 t	July 31, 1980 '000 t	April 1, 1981 '000 t	July 31, 1981 '000 t	July 31, 1981 %	April 1, 1981 %
Primary elevators	8 749	5 289	4 637	5 557	60.5	53.0	63.5
Process elevators	602	241	177	198	40.0	29.4	32.9
Terminal <sup>2</sup>	3 695	1 558	1 933	1 735	42.2	52.3	47.0
Other <sup>3</sup>	3 586	1 112	945	1 536	31.0	26.4	42.8
Total <sup>4</sup>	16 632	8 200	7 692	9 026	49.3	46.3	54.3

<sup>1</sup>Wheat, oats, barley, rye, flaxseed and rapeseed.

<sup>2</sup>Includes Thunder Bay, Churchill and the Pacific Coast ports and interior terminals at Moose Jaw, Saskatoon, Edmonton, Calgary and Lethbridge.

<sup>3</sup>Transfer elevators.

<sup>4</sup>Total stocks are those in licensed storage and do not include stocks in transit, aboard ships or in the railway system.

### 9.10 Wheat milled for flour, and production and exports of wheat flour, 10-year average 1971-80 and crop years ended July 31, 1977-81

Crop year	Wheat milled for flour '000 t	Wheat flour production '000 t	Wheat flour exports <sup>1</sup>	
			Amount '000 t	Production %
Av. 1971-72 — 1980-81	2 488	1 828	643	35.2
1976-77	2 523	1 864	698 <sup>f</sup>	37.4 <sup>f</sup>
1977-78	2 638	1 964	752 <sup>f</sup>	38.3 <sup>f</sup>
1978-79	2 668	1 966	762	38.8
1979-80	2 640	1 936	614	31.7
1980-81	2 506	1 850	692	37.4

<sup>1</sup>In terms of wheat equivalent.

### 9.11 Harvested area, yields and prices of principal field crops

Crop and year	Area '000 ha	Yield kg per ha	Production '000 t	Average price \$ per t	Total value <sup>1</sup> \$'000
<b>Wheat</b>					
1977 <sup>f</sup>	10 111	1 964	19 858	103.58	2,056,793
1978 <sup>f</sup>	10 580	1 998	21 136	138.81	2,933,909
1979	10 552	1 634	17 196	176.19	3,029,733
1980	11 210	1 721	19 292	203.39	3,923,789
1981	12 427	1 996	24 803	..	..
1982	12 595	2 193	27 620	..	..
<b>Oats</b>					
1977 <sup>f</sup>	2 119	2 022	4 283	67.18	287,754
1978 <sup>f</sup>	1 802	1 980	3 568	72.43	258,451
1979	1 492	1 929	2 879	97.27	280,025
1980	1 451	2 006	2 912	124.77	363,269
1981	1 561	2 043	3 188	..	..
1982	1 652	2 284	3 776	..	..
<b>Barley</b>					
1977 <sup>f</sup>	4 753	2 483	11 802	75.49	890,974
1978 <sup>f</sup>	4 262	2 439	10 397	80.18	833,614
1979	3 730	2 273	8 478	107.19	908,781
1980	4 686	2 431	11 395	141.00	1,606,601
1981	5 476	2 506	13 724	..	..
1982	5 189	2 712	14 074	..	..
<b>Rye</b>					
1977 <sup>f</sup>	250	1 625	407	87.93	35,771
1978 <sup>f</sup>	318	1 904	605	103.05	62,334
1979	332	1 595	530	146.28	77,513
1980	313	1 452	455	173.53	78,922
1981	444	2 082	926	..	..
1982	439	2 024	888	..	..

## 9.11 Harvested area, yields and prices of principal field crops (concluded)

Crop and year	Area '000 ha	Yield kg per ha	Production '000 t	Average price \$ per t	Total value <sup>1</sup> \$'000
Mixed grains					
1977 <sup>1</sup>	624	2 558	1 597	74.63	119,183
1978 <sup>1</sup>	604	2 706	1 635	81.96	134,013
1979	593	2 634	1 559	107.16	167,152
1980	569	2 651	1 511	139.35	210,306
1981	545	2 675	1 459	..	..
1982	532	2 790	1 483	..	..
Flaxseed					
1977 <sup>1</sup>	598	1 092	653	211.33	137,953
1978 <sup>1</sup>	526	1 087	572	275.25	157,305
1979	931	876	815	289.08	235,719
1980	555	796	442	329.30	145,486
1981	465	1 005	468	..	..
1982	627	1 191	747	..	..
Rapeseed					
1977	1 452	1 359	1 973	281.49	555,411
1978 <sup>1</sup>	2 825	1 238	3 497	280.32	980,321
1979	3 406	1 001	3 410	271.01	924,436
1980	2 080	1 194	2 484	281.28	698,525
1981	1 402	1 310	1 837	..	..
1982	1 717	1 231	2 114	..	..
Corn for grain					
1977 <sup>1</sup>	737	5 768	4 250	86.47	367,468
1978 <sup>1</sup>	852	5 768	4 250	108.86	487,624
1979	953	5 536	5 252	121.05	638,649
1980	1 022	5 628	5 752	153.02	880,382
1981	1 139	5 860	6 673	..	..
1982	1 103	5 787	6 383	..	..
Potatoes					
1977 <sup>1</sup>	112	22 545	2 525	62.49	157,798
1978 <sup>1</sup>	110	22 845	2 513	70.89	178,158
1979	113	24 354	2 752	59.21	162,952
1980	106	23 311	2 471	142.61	352,390
1981	111	24 171	2 683	103.89	278,744
1982	113	24 345	2 751	..	..
Tame hay					
1977 <sup>1</sup>	5 578	4 418	24 642	48.34	1,191,259
1978 <sup>1</sup>	5 562	4 802	26 708	49.43	1,320,295
1979	5 447	4 804	26 169	52.64	1,382,749
1980	5 263	4 402	23 168	62.99	1,459,442
1981	5 108	4 892	24 990	..	..
1982	5 108	4 769	24 355	..	..

<sup>1</sup>Gross value of farm production; does not represent cash income from sales.

## 9.12 Livestock slaughtered at federally inspected establishments

Year	Cattle	Calves	Sheep	Pigs
1976	3,676,284	655,443	187,674	7,493,245
1977	3,761,419	645,591	132,585	8,007,313
1978	3,429,810	494,510	97,583	8,934,470
1979	2,954,318	324,890	92,825	11,030,840
1980	3,059,483	337,331	114,840	12,927,452
1981	3,196,887	365,760	175,868	12,844,300
1982	3,293,947	411,826	201,995	12,701,317

9.13 Production and apparent domestic consumption of poultry meat<sup>1</sup>

Year and item	Net production t	Total supply t	Domestic consumption t	Per capita consumption kg
1979				
Fowl and chickens	429 455	469 314	445 675	18.8
Turkeys	102 413	115 830	96 997	4.1
Total	531 868	585 144	542 672	22.9

### 9.13 Production and apparent domestic consumption of poultry meat<sup>1</sup> (concluded)

Year and item	Net production t	Total supply t	Domestic consumption t	Per capita consumption kg
1980				
Fowl and chickens	421 285	463 442	444 584	18.6
Turkeys	100 454	120 360	102 755	4.3
Total	521 739	583 802	547 339	22.9
1981				
Fowl and chickens	431 243	470 354	447 706	18.4
Turkeys	95 435	114 676	101 042	4.2
Total	526 678	585 030	548 748	22.6
1982				
Fowl and chickens	429 949	478 945	460 484	18.7
Turkeys	97 510	111 901	97 308	4.0
Total	527 459	590 846	557 792	22.7

<sup>1</sup>Eviscerated weight.

Note: 1981 and 1982 include Newfoundland production. In previous years Newfoundland production was given separately in Introduction of publications.

### 9.14 Production and utilization of milk, by province

Province and year		Farm sales of milk and cream			Total milk production kL
		Fluid kL			
			Milk kL	Cream <sup>1</sup> kL	
Newfoundland	1979	..	..	..	..
	1980	..	..	..	..
	1981	..	..	..	..
	1982	10 472	—	—	10 472
Prince Edward Island	1979	16 788	61 828	11 545	90 161
	1980	16 617	67 296	9 577	93 490
	1981	14 234	78 415	7 667	100 316
	1982	13 230	88 223	7 771	109 224
Nova Scotia	1979	106 207	56 039	5 639	167 885
	1980	108 184	59 331	5 648	173 163
	1981	108 108	62 240	5 575	175 923
	1982	110 837	60 280	6 065	177 182
New Brunswick	1979	68 961	30 732	10 002	109 695
	1980	70 496	37 572	9 406	117 474
	1981	69 730	45 072	8 076	122 878
	1982	69 137	55 430	7 927	132 494
Quebec	1979	590 475	2 125 003	3 242	2 718 720
	1980	619 106	2 231 349	1 181	2 851 636
	1981	629 488	2 265 520	718	2 895 726
	1982	633 105	2 379 125	653	3 012 883
Ontario	1979	999 434	1 296 708	90 489	2 386 631
	1980	1 000 634	1 378 072	91 950	2 467 188
	1981	1 000 343	1 398 481	90 262	2 489 086
	1982	984 676	1 468 009	96 047	2 548 732
Manitoba	1979	110 534	132 072	37 300	279 906
	1980	110 180	143 864	34 035	288 079
	1981	108 415	148 987	31 149	288 551
	1982	108 392	153 707	31 446	293 545
Saskatchewan	1979	108 634	46 434	37 408	192 476
	1980	98 524	66 766	35 445	200 735
	1981	99 835	81 622	32 194	213 651
	1982	101 891	91 229	26 594	219 714
Alberta	1979	238 943	203 212	66 160	508 315
	1980	253 539	217 741	55 722	527 002
	1981	264 459	246 593	46 578	557 630
	1982	266 342	280 307	43 154	589 803
British Columbia	1979	294 836	141 180	1 318	437 334
	1980	305 378	153 388	1 155	459 921
	1981	310 410	174 842	1 075	474 733
	1982	2 608 492	4 751 152	220 732	7 580 376
Canada	1979	2 534 812	4 093 208	263 103	6 891 123
	1980	2 582 658	4 355 379	240 651	7 178 688
	1981	2 608 715	4 486 455	223 334	7 318 494
	1982	2 608 492	4 751 152	220 732	7 580 376

<sup>1</sup>Farm separated cream expressed in terms of milk equivalent.

9.15 Cash receipts from milk and cream, sold off farms, by province (thousand dollars)

Province and year		Farm sales of milk and cream			Supplementary payments	Total cash receipts	
		Fluid purposes	Industrial purposes				Total
			Delivered as milk	Delivered as cream			
Newfoundland	1979	..	..	..	..	..	
	1980	..	..	..	..	..	
	1981	..	..	..	..	..	
	1982	5,965	—	—	5,965	5,965	
Prince Edward Island	1979	5,056	10,835	1,278	4,430	22,009	
	1980	5,572	15,022	1,195	21,789	26,542	
	1981	5,607	19,878	1,117	26,602	31,548	
	1982	5,492	22,734	1,239	29,465	34,721	
Nova Scotia	1979	34,469	12,485	652	48,766	52,422	
	1980	40,398	14,568	912	55,878	59,717	
	1981	44,144	17,678	793	62,615	66,450	
	1982	48,760	17,863	924	67,547	70,941	
New Brunswick	1979	21,277	5,902	1,129	28,486	30,614	
	1980	23,043	8,099	1,156	32,298	34,857	
	1981	25,700	11,083	1,109	37,892	40,917	
	1982	27,468	14,703	1,169	43,340	46,831	
Quebec	1979	183,568	491,051	380	674,999	705,237	
	1980	218,705	576,400	145	795,250	919,179	
	1981	250,704	675,343	101	926,148	1,061,280	
	1982	270,586	764,643	103	1,035,332	1,166,845	
Ontario	1979	317,871	267,768	9,881	603,589 <sup>2</sup>	681,781	
	1980	358,299	326,635	11,129	709,719 <sup>3</sup>	790,083	
	1981	412,105	376,050	12,578	805,401 <sup>4</sup>	895,641	
	1982	415,809	440,810 <sup>5</sup>	14,697	871,316 <sup>5</sup>	958,566	
Manitoba	1979	32,478	26,312	3,739	63,419	73,176	
	1980	37,514	34,048	3,929	75,491	85,606	
	1981	43,821	38,764	4,002	86,587	96,938	
	1982	46,926	44,728	4,290	95,944	106,036	
Saskatchewan	1979	35,314	8,490	4,533	48,337	54,104	
	1980	33,502	13,897	4,653	52,052	58,111	
	1981	34,948	19,512	4,540	59,000	65,900	
	1982	37,282	24,228	3,787	65,297	72,126	
Alberta	1979	72,349	42,522	6,897	123,108	137,956	
	1980	88,123	53,553	6,606	148,282	163,894	
	1981	102,318	65,479	6,195	173,992	191,255	
	1982	118,438	84,424	6,008	208,870	226,816	
British Columbia	1979	108,732	36,724	127	145,583	152,683	
	1980	128,443	45,601	137	174,181	182,064	
	1981	142,583	52,942	156	195,681	205,121	
	1982	152,967	64,073	163	217,203	225,870	
Canada	1979	812,114	902,089	28,616	1,753,866	1,999,982	
	1980	933,599	1,087,823	29,862	2,064,940	2,320,053	
	1981	1,061,930	1,276,729	30,591	2,373,918	2,655,050	
	1982	1,129,693	1,478,206	32,380	2,640,279	2,914,717	

<sup>1</sup>Adjusted for provincial levies on manufacturing milk and cream.  
<sup>2</sup>Includes return of contingency levy of \$8,369,000.  
<sup>3</sup>Includes return of over-quota levy of \$13,656,000.  
<sup>4</sup>Includes return of over-quota levy of \$4,668,000.  
<sup>5</sup>Includes return of over-quota levy of \$8,127,000.

9.16 Production of butter and cheese, by province (tonnes)

Province and year	Butter				Cheese Factory <sup>1</sup>
	Creamery	Farm	Whey	Total	
Prince Edward Island	1979	1 305	—	70	1 375
	1980	1 237	—	75	1 312
	1981	1 456	—	97	1 553
	1982	1 358	—	87	1 445
Nova Scotia	1979	1 417	—	—	1 417
	1980	1 568	—	38	1 606
	1981	1 698	—	29	1 727
	1982	1 671	—	27	1 698

<sup>1</sup> 5 213  
5 567  
5 911<sup>3</sup>  
5 585<sup>3</sup>

### 9.16 Production of butter and cheese, by province (tonnes) (concluded)

Province and year	Butter				Cheese Factory <sup>1</sup>
	Creamery	Farm	Whey	Total	
New Brunswick	1979 898	—	—	898	—
	1980 791	—	—	791	2
	1981 680	—	—	680	2
	1982 934	—	—	934	—
Quebec	1979 45 272	—	2 446	47 718	75 705
	1980 45 181	—	2 815	47 996	81 049
	1981 44 761	—	2 638	58 399	75 667
	1982 62 615	—	2 101	64 716	67 289
Ontario	1979 32 005	—	891	32 896	68 892
	1980 35 076	—	815	35 891	72 081
	1981 35 180	—	1 250	36 430	76 159
	1982 35 711	—	1 487	37 198	78 839
Manitoba	1979 4 205	—	—	4 205	6 011
	1980 4 199	—	—	4 199	6 857
	1981 3 774	—	—	3 774	6 465
	1982 4 266	—	—	4 266	4 788
Saskatchewan	1979 3 536	—	—	3 536	1 333
	1980 3 903	—	—	3 903	1 086
	1981 4 445	—	—	4 445	958
	1982 5 218	—	—	5 218	688
Alberta	1979 6 674	—	—	6 674	6 402
	1980 8 150	—	—	8 150	6 648
	1981 7 644	—	—	7 644	7 172
	1982 8 530	—	—	8 530	7 150
British Columbia	1979 2 699	—	—	2 699	2 117
	1980 2 331	—	—	2 331	2 386
	1981 2 331	—	—	2 263	2 280
	1982 2 436	—	—	2 436	3 405
Canada	1979 98 011	—	3 407	101 418	167 049
	1980 102 436	—	3 743	106 179	177 336
	1981 112 901	—	4 014	116 915	176 776
	1982 122 739	—	3 702	126 441	169 878

<sup>1</sup>Factory-made cheese includes cheddar and other cheese made from whole milk and cream. Amounts for other cheese are included in Quebec, Ontario and Alberta figures, but, as fewer than three firms reported in the other provinces, data cannot be included except in the Canada total.

<sup>2</sup>Included with Nova Scotia.

<sup>3</sup>Includes Prince Edward Island and New Brunswick.

### 9.17 Apparent domestic consumption of specified dairy products

Product	Total consumption				Per capita consumption			
	1979	1980	1981	1982	1979	1980	1981	1982
	t	t	t	t	kg	kg	kg	kg
Creamery butter	105 838	108 212	107 824	105 476	4.58	4.52	4.45	4.28
Cheddar cheese	91 949	94 880	97 686	89 803	3.88	3.96	4.03	3.65
Process cheese	66 569	70 346	72 320	74 301	2.81	2.94	2.99	3.02
Other cheese	85 681	88 217	93 984	100 411	3.62	3.68	3.88	4.08
Cottage cheese	26 974	28 840	31 285	31 792	1.14	1.20	1.29	1.29
Skim milk powder	51 873	42 987	48 538	60 816	2.19	1.80	2.00	2.47
	kL	kL	kL	kL	L	L	L	L
Evaporated whole milk	58 679	54 005	52 922	62 753	2.48	2.26	2.19	2.55
Partly skimmed evaporated whole milk 4%	49	—	—	—	—	—	—	—
Condensed whole milk	9 042	12 825	12 407	11 354	0.38	0.54	0.51	0.46
Yogourt	39 065	39 324	40 759	37 914	1.65	1.64	1.68	1.54
Ice cream, hard and soft	307 669	311 369	311 970	302 965	12.99	13.01	12.88	12.30

## 9.18 Estimated commercial production and farm value of fruit

Fruit	Weight (t)				Farm value (\$'000)			
	1979	1980	1981	1982	1979	1980	1981	1982
Apples	434 898	552 589	417 379	478 910	96,989	84,977	98,047	..
Apricots	2 874	3 517	1 952	3 224	1,182	1,535	901	..
Blueberries	15 606	13 647	18 033	21 847	14,616	14,684	19,971	..
Cherries (sour)	8 568	9 992	3 071	7 384	9,014	5,561	3,495	..
Cherries (sweet)	10 513	9 119	7 169	4 969	7,507	6,357	5,923	..
Cranberries	7 430	5 819	7 949	7 254	3,970	4,558	8,506	..
Grapes	73 313	74 854	72 989	75 004	24,039	27,881	29,393	..
Peaches	33 110	40 947	27 252	38 970	15,284	18,533	15,392	..
Pears	33 409	39 405	31 514	32 185	9,580	11,248	9,231	..
Plums and prunes	7 728	9 492	5 918	..	3,018	3,649	2,071	..
Raspberries	7 563	8 942	9 065	12 519	15,283	9,486	15,775	..
Strawberries	24 649	27 266	26 702	33 856	23,180	28,468	30,187	..

## 9.19 Estimated commercial area and production of vegetables

Vegetables	Area (ha)				Production (t)			
	1979	1980	1981	1982	1979	1980	1981	1982
Asparagus	1 507	1 502	1 637	1 591	2 568	2 282	2 163	2 574
Beans	9 359	8 794	7 823	8 695	48 467	50 036	42 472	46 522
Beets	1 068	1 005	992	2 659	22 254	20 134	19 567	25 231
Cabbage	4 798	4 901	5 216	..	130 231	129 747	142 641	..
Carrots	6 542	6 667	6 953	..	270 252	226 713	256 511	..
Cauliflower	1 969	2 193	2 163	2 914	33 983	35 027	30 784	45 008
Celery	476	565	630	652	29 801	32 427	36 144	33 209
Corn	28 418	28 333	27 951	31 658	278 161	267 860	271 623	330 897
Cucumbers	3 786	3 481	3 649	3 911	70 244	60 646	64 889	63 447
Lettuce	1 949	2 135	2 046	1 930	41 805	43 609	40 943	40 495
Onions	3 734	3 739	3 872	3 767	114 933	105 539	129 125	134 741
Parsnips	204	202	191	254	3 133	3 033	2 757	4 829
Peas	19 960	18 137	17 525	20 577	71 934	67 274	62 651	74 048
Rutabagas	3 572	3 452	3 423	..	106 923	108 037	103 647	..
Spinach	472	456	406	..	3 611	3 216	2 447	..
Tomatoes	11 789	12 273	13 405	..	450 595	413 822	488 598	..

## 9.20 Honey production, by province, and total value, 1979-82, with 10-year average for 1968-77 and 1969-78

Province	Average		1979	1980	1981	1982
	1968-77	1969-78				
Prince Edward Island	t	24	28	56	49	58
Nova Scotia	"	134	144	174	210	222
New Brunswick	"	75	79	134	115	132
Quebec	"	1 614	1 834	3 787	1 647	4 792
Ontario	"	3 534	3 524	3 709	2 495	3 343
Manitoba	"	4 008	4 498	7 087	6 960	7 569
Saskatchewan	"	3 446	3 734	5 371	5 697	5 948
Alberta	"	8 565	9 008	10 251	10 306	10 478
British Columbia	"	1 512	1 608	2 336	1 756	2 286
Total production	t	22 912	24 457	32 905	29 235	34 769
Total value	\$'000	17,490	20,691	45,682	42,465	58,505

## 9.21 Harvested area, yield, production and value of sugar beets

Year	Sugar beets				
	Harvested area ha	Yield per ha kg	Total production t	Average price per tonne \$	Total farm value \$'000
1977 <sup>f</sup>	25 600	39 492	1 011 000	33.75	34,121
1978 <sup>f</sup>	24 710	38 304	946 500	34.32	32,483
1979	23 760	36 002	855 400	71.21	60,915
1980	26 570	33 161	881 100	61.98	54,609
1981	29 290	41 499	1 215 500	..	..
1982	28 500	36 526	1 041 000	..	..

## 9.22 Production and value of maple sugar and maple syrup, 1980-82 with 5-year average for 1972-76 and 1977-81

Province and year	Maple sugar		Maple syrup		Total value, sugar and syrup \$'000
	Quantity kg	Value \$'000	Quantity kL	Value \$'000	
Nova Scotia					
Av. 1972-76	5 000	13	17	43	56
Av. 1977-81	10 000	58	37	152	210
1980	10 000	66	31	152	218
1981	13 000	98	44	231	329
1982	12 000	101	41	239	340
New Brunswick					
Av. 1972-76	9 000	31	39	96	127
Av. 1977-81	9 000	50	34	130	180
1980	9 000	47	27	108	155
1981	13 000	79	36	159	238
1982	10 000	72	23	109	181
Quebec					
Av. 1972-76	133 000	336	7 733	12,512	12,848
Av. 1977-81	157 000	682	9 363	25,166	25,848
1980	161 000	762	10 258	..	..
1981	183 000	963	12 918	35,996	36,959
1982	181 000	962	7 321	..	..
Ontario					
Av. 1972-76	6 000	24	636	1,431	1,455
Av. 1977-81	5 000	37	649	2,461	2,498
1980	4 000	24	650	2,020	2,044
1981	6 000	51	650	3,141	3,192
1982	21 000	203	768	3,978	4,181
Total					
Av. 1972-76	153 000	404	8 425	14,082	14,486
Av. 1977-81	181 000	827	10 083	27,909	28,736
1980	184 000	899	10 784	..	..
1981	215 000	1,191	13 648	39,527	40,718
1982	224 000	1,338	8 153	..	..

## 9.23 Production and value of farm eggs

Province	Egg production ('000 doz)				Total value sold and used (\$'000)			
	1979	1980	1981	1982	1979	1980	1981	1982
Newfoundland	7,222	7,399	7,465	7,317	6,209	6,880	7,744	7,330
Prince Edward Island	2,716	2,794	2,874	2,884	2,154	2,428	2,836	2,721
Nova Scotia	16,687	18,778	18,968	18,791	13,725	16,561	19,563	19,083
New Brunswick	8,964	9,380	9,935	10,021	8,056	9,196	11,564	11,725
Quebec	74,867	78,803	81,677	79,788	60,351	69,884	83,648	81,035
Ontario	180,250	189,250	196,920	198,109	134,546	156,659	187,363	182,166
Manitoba	48,358	51,358	50,829	51,556	32,620	38,134	45,679	44,908
Saskatchewan	20,566	21,203	20,948	20,439	15,117	16,538	19,511	18,901
Alberta	43,924	46,593	44,784	44,644	34,233	39,358	47,438	44,681
British Columbia	59,077	62,501	61,834	60,010	47,058	54,540	62,004	58,974
Canada	462,631	488,059	496,234	493,559	354,069	410,178	487,350	471,524

## 9.24 Harvested area, production and value of the commercial crop of leaf tobacco

Year	Maritimes			Quebec			Ontario		
	Harvested area ha	Production t	Value \$'000	Harvested area ha	Production t	Value \$'000	Harvested area ha	Production t	Value \$'000
1978	1 945	3 242	8,414	3 480	6 623	16,131	1	105 750	275,058
1979	1 998	3 277	9,543	3 388	6 386	17,587	1	69 188	201,536
1980	2 038	2 931	8,760	3 491	5 650	18,579	1	98 377	295,235
1981	1 976	3 944	13,155	3 528	7 238	23,471	1	101 187	341,712
1982	2 097	4 304	14,668	3 625	6 922	23,663	1	58 949	209,470

<sup>1</sup>Commencing with the 1976 crop year, producers of flue-cured tobacco in Ontario changed from an area harvested basis to weight delivered formula, thus these data are no longer available.

### 9.25 Harvested area, production and value of the commercial crop of leaf tobacco, by main type

Type of tobacco and year		Harvested area ha	Average yield per ha kg	Total production t	Average farm price per kg \$	Gross farm value \$'000
Flue-cured	1978	1	1	113 053	2.608	294,883
	1979	1	1	76 735	2.924	224,404
	1980	1	1	105 890	3.003	318,033
	1981	1	1	110 534	3.373	372,830 <sup>2,3</sup>
	1982	1	1	67 463	3.555	239,842 <sup>2,3</sup>
Burley	1978	340	2 650	901	2.039	1,837
	1979	351	2 840	997	2.105	2,099
	1980	347	2 654	921	2.674	2,463
	1981	384	2 674	1 027	3.587	3,684
	1982	607	2 825	1 715	3.154	5,410
Cigar leaf	1978	363	2 499	907	1.654	1,500
	1979	292	2 000	584	1.764	1,030
	1980	306	1 657	507	1.744	1,884
	1981	235	1 563	367	1.913	702
	1982	267	1 653	441	2.147	947
Total <sup>4</sup>	1978	1	1	115 615	2.591	299,603
	1979	1	1	78 851	2.900	228,666
	1980	1	1	107 868	2.990	322,574
	1981	1	1	112 369	3.367	378,338
	1982	1	1	70 175	3.531	247,801

<sup>1</sup>Commencing with the 1976 crop year, producers of flue-cured tobacco in Ontario changed from an area harvested basis to weight delivered formula, thus these data are no longer available.

<sup>2</sup>The total 1981 farm value of Ontario flue-cured tobacco has been revised to reflect the 28.6 million lbs. sold at the 1982 crop year average price.

<sup>3</sup>Total farm value of Ontario flue-cured tobacco includes only the marketed production from the 1982 crop.

<sup>4</sup>Includes other types not specified.

### 9.26 Production and disposition of tobacco products

Item and year		Total production	Sales		
			In Canada <sup>1</sup>	Ship/air stores, embassies/Canada <sup>2</sup>	For export – bulk shipments, including Canadian mission abroad <sup>2</sup>
Cigarettes ('000)	1979	65,442,671	63,865,638	384,358	566,313
	1980	67,179,877	64,491,608	414,719	593,505
	1981	68,611,012	66,558,869	364,977	575,797
	1982	68,143,061	66,337,506	355,379	599,998
Cigars ('000)	1979	431,475	420,294	3,216	14,049
	1980	448,925	414,971	3,516	10,008
	1981	433,923	413,844	3,141	11,412
	1982	403,745	381,149	2,332	12,607
Manufactured tobacco Fine cut <sup>3</sup> (kg)	1979	5 162 535	5 227 489	460	7 578
	1980	4 760 353	4 783 953	41	7 330
	1981	4 726 930	4 764 731	154	9 602
	1982	5 715 345	5 552 552	278	8 738
Pipe tobacco <sup>4</sup> (kg)	1979	247 885	245 180	733	5 400
	1980	213 710	214 891	42	68
	1981	178 122	183 593	—	—
	1982	152 286	166 436	—	—
Other <sup>5</sup> (kg)	1979	577 980	573 289	—	—
	1980	588 629	578 370	—	—
	1981	491 627	540 420	—	—
	1982	135 483	143 104	—	—

<sup>1</sup>Includes samples and goods invoiced to wholesalers, retailers, and institutions which are subject to excise duty, less returned goods credited to same.

<sup>2</sup>Excise duty exempt.

<sup>3</sup>Includes tobacco, intended for cigarettes.

<sup>4</sup>Includes tobacco, intended for pipe smoking.

<sup>5</sup>Other tobacco, plug, snuff, chewing and twist.

### 9.27 Average index<sup>1</sup> of farm prices of agricultural products (1971 = 100)

Province	1977 <sup>e</sup>	1978 <sup>e</sup>	1979	1980	1981	1982
Prince Edward Island	224.0	229.8	251.3	280.7	370.9	295.1
Nova Scotia	197.2	217.9	243.5	257.1	279.5	285.7
New Brunswick	224.2	227.7	233.1	258.0	338.9	294.6
Quebec	187.7	223.2	244.1	254.9	286.4	299.0
Ontario	180.2	206.1	231.6	241.2	263.7	271.9
Manitoba	202.1	231.7	271.7	297.4	317.3	309.7
Saskatchewan	205.5	232.6	288.3	329.8	344.4	315.8
Alberta	193.0	226.4	268.8	291.0	305.1	297.4
British Columbia	180.1	206.0	236.0	254.6	273.9	284.2
Canada	191.7	220.5	255.7	276.6	298.2	294.0

<sup>1</sup>A description of this index, its coverage and the methods used can be obtained from Agriculture Division, Statistics Canada. Monthly index numbers of farm prices are published in **Index numbers of farm prices of agricultural products** (Cat. No. 62-003).

### 9.28 Average cash prices a tonne of major Canadian grains, crop years ended July 31, 1978-82 (basis in store Thunder Bay)

Year	Averages in dollars per tonne					
	Wheat <sup>1</sup> 1 C.W. Red Spring 13.5%	Oats <sup>1</sup> 2 C.W.	Barley <sup>1</sup> 2 C.W. - Six-Row	Rye <sup>2</sup> 2 Canada	Flaxseed <sup>2</sup> 1 Canada	Rapeseed <sup>2</sup> 1 Canada
1978	137.20	103.88	110.92	101.22	225.97	295.90 <sup>3</sup>
1979	177.32	108.11	131.00	106.18	303.72	316.03
1980	215.38	130.50	182.14	176.63	328.95	309.10
1981	246.62	169.30	215.98	206.06	377.75	331.15
1982	214.31	176.38	184.81	166.37	352.12	325.19

<sup>1</sup>Canadian Wheat Board daily fixed prices.

<sup>2</sup>Winnipeg Commodity Exchange daily closing cash quotations.

<sup>3</sup>As of April 1978, basis in store Vancouver.

### 9.29 Weighted average prices per 100 kg of Canadian livestock at public stockyards (dollars)

Item	Average prices				
	1978	1979	1980	1981	1982
Toronto					
A1,2 steers over 454 kg	136.84	176.88	178.00	176.37	177.56
D1,2 cows	91.60	134.02	124.50	116.40	111.16
Feeder steers over 363 kg	138.58	181.49	173.48	165.04	167.33
Choice and good veal calves	150.07	201.64	194.14	169.07	163.58
Index 100 hogs, dressed	153.88	141.43	130.25	154.35	183.69
Good lambs	174.45	191.85	179.76	164.82	163.89
Winnipeg					
A1,2 steers over 454 kg	127.89	167.79	167.68	168.37	165.72
D1,2 cows	88.03	125.40	114.75	106.04	102.34
Feeder steers over 363 kg	129.34	177.45	167.64	159.95	158.31
Choice and good veal calves	163.23	243.37	243.74	238.91	238.03
Index 100 hogs, dressed	149.54	141.43	124.94	148.59	177.71
Good lambs	145.81	154.81	143.68	120.11	122.09
Calgary					
A1,2 steers over 454 kg	126.87	168.76	164.44	162.99	161.11
D1,2 cows	88.78	128.46	114.13	106.97	102.27
Feeder steers over 363 kg	138.89	188.36	173.70	164.13	162.41
Choice and good veal calves	157.63	—	—	—	—
Index 100 hogs, dressed	—	—	—	—	—
Good lambs	—	—	—	—	—
Edmonton					
A1,2 steers over 454 kg	124.38	166.27	164.33	160.92	157.83
D1,2 cows	85.38	123.02	113.03	102.71	97.75
Feeder steers over 363 kg	139.95	188.94	171.06	161.38	158.91
Choice and good veal calves	162.57	—	—	—	—
Index 100 hogs, dressed	148.83	141.87	126.15	149.50	181.29
Good lambs	144.66	144.07	138.56	125.33	124.23

## 9.30 Per capita supplies of food moving into consumption 1978-81 with average for 1974-78

Kind of food and weight base		kg per capita per annum				
		Average	1978	1979	1980	1981
		1974-78				
CEREALS	retail wt	67.47	69.66	67.21	70.52	67.21
Wheat flour	"	59.81	61.74	56.63	59.59	55.81
Rye flour	"	0.41	0.44	0.44	0.45	0.45
Oatmeal and rolled oats	"	1.47	1.44	1.58	1.45	1.48
Pot and pearl barley	"	1	1	1	1	1
Corn flour and meal	"	1	1	1	1	1
Buckwheat flour	"	1	1	1	1	1
Rice	"	2.59	2.84	3.15	3.21	3.45
Breakfast food	"	3.18	3.20	3.01	3.27	3.65
SUGAR AND SYRUPS	sugar content	42.79	42.94	41.65	40.88	38.96
Sugar	retail wt	41.46	41.75	40.46	39.83	37.77
Maple sugar	"	0.18	0.15	0.20	0.28	0.38
Honey	"	0.87	0.93	1.05	0.78	1.11
Other	"	0.67	0.44	0.27	0.25	..
PULSES AND NUTS	retail wt	5.80	4.81	5.22	3.83	4.89
Dry beans	"	1.11	1	0.84	0.07	..
Baked canned beans	"	1	..	..	..	..
Dry peas	"	0.89	1.09	0.64	0.31	0.67
Peanuts	"	2.89	2.81	2.64	2.24	2.89
Tree nuts	"	0.91	0.91	1.10	1.21	1.33
OILS AND FATS	fat content	20.75	23.01	22.71	20.39	20.79
Margarine	retail wt	5.49	5.94	5.39	5.38	6.21
Shortening and shortening oils	"	7.70	7.47	8.09	8.75	8.37
Salad oils	"	3.94	4.25	3.64	3.65	3.83
Butter	"	5.05	4.47	4.47	4.51	4.42
Lard	"	3.06	2.88	3.02	..	..
FRUIT	fresh equiv.	123.54	133.34	133.00	130.96	138.37
Fresh	retail wt	60.61	60.50	60.20	60.36	62.64
Canned	net wt canned	9.32	10.12	7.17	8.67	9.16
Frozen	retail wt	1.18	1.01	0.91	1.30	0.85
Juice	net wt canned	19.26	24.87	25.22	25.75	27.39
Tomatoes, fresh	retail wt	5.31	5.77	5.88	5.80	5.42
canned	net wt canned	2.95	3.11	3.35	3.23	3.34
Tomato juice	"	4.22	4.48	4.40	4.24	3.69
pulp, paste and purée	"	1	1.31	1.48	1.21	1.64
ketchup	"	1	..	..	..	..
Citrus fruit, fresh	retail wt	16.02	15.54	14.40	16.27	16.09
juice	net wt canned	10.22	12.23	12.92	12.88	14.19
Apples, fresh	retail wt	12.10	10.75	11.85	10.77	12.96
canned	net wt canned	0.08	0.10	0.31	0.08	0.10
juice	"	4.03	5.05	5.23	6.03	6.16
frozen	retail wt	0.14	0.15	0.09	0.10	0.04
sauce	net wt canned	0.58	0.61	0.69	0.48	0.52
pie filling	"	0.26	0.29	0.17	0.24	0.13
Apricots, fresh	retail wt	0.09	0.07	0.07	0.08	0.07
canned	net wt canned	0.13	0.14	0.16	0.11	0.13
Bananas, fresh	retail wt	9.90	10.05	10.52	10.21	10.68
Blueberries, fresh	"	0.20	0.15	0.23	0.11	0.31
canned	net wt canned	1	0.02	0.02	0.02	0.02
frozen	retail wt	1	..	0.05	0.11	..
Cherries, fresh	"	0.61	0.45	0.59	0.48	0.40
canned	net wt canned	1	1	1	1	1
frozen	retail wt	0.20	0.19	1	0.24	1
Cranberries, fresh	"	0.33	0.39	0.36	0.34	0.43
Melons, fresh	"	3.92	4.60	3.62	3.94	4.25
Peaches, fresh	"	2.51	2.13	1.99	2.14	1.89
canned	net wt canned	1.42	1.40	1.35	1.16	1.15
frozen	"	1	-	-	-	-
Pears, fresh	retail wt	1.80	1.79	1.71	1.74	1.96
canned	net wt canned	0.74	0.75	0.73	0.51	0.55
Pineapples, fresh	retail wt	0.33	0.44	0.40	0.40	0.46
canned	net wt canned	1.00	1.09	1.11	1.31	1.32
juice	"	0.43	0.54	0.62	0.59	0.61
Plums, fresh	retail wt	1.04	1.05	1.19	1.16	1.22
canned	net wt canned	0.09	0.07	0.09	0.08	0.06
Raspberries, fresh	retail wt	1	..	..	0.02	..
canned	net wt canned	0.03	0.02	1	1	1
frozen	retail wt	0.22	0.19	0.22	0.28	0.32
Strawberries, fresh	"	1.14	1.41	1.44	1.44	1.48
canned	net wt canned	0.04	0.04	0.05	0.04	0.03
frozen	retail wt	0.62	0.55	0.55	0.57	0.49
Grapes, fresh	"	5.31	4.79	5.95	5.46	5.02
Unspecified, fresh	"	1	1	1	1	1
canned	net wt canned	1	1	1	1	1

### 9.30 Per capita supplies of food moving into consumption 1978-81 with average for 1974-78 (continued)

Kind of food and weight base		kg per capita per annum				
		Average	1978	1979	1980	1981
		1974-78				
frozen	retail wt	1				
juice	net wt canned	1	2.27	1.61	1.63	2.32
jams, jellies, marmalade	processed wt	2.00	1.77	..	..	..
VEGETABLES <sup>2</sup>	fresh equiv.	58.40	64.73	64.48	65.17	66.12
Fresh	retail wt	42.29	48.39	47.90	50.49	52.13
Canned	net wt canned	6.39	8.04	6.45	7.84	7.60
Frozen	retail wt	2.95	3.45	3.67	3.88	3.70
Cabbage, fresh	"	5.79	6.94	6.45	6.44	6.83
Lettuce	"	8.68	9.24	9.46	9.32	9.56
Spinach, fresh	"	7.04	7.00	8.60	8.37	8.29
Carrots, fresh	"	0.34	0.34	0.33	0.25	0.21
canned	net wt canned	0.50	0.56	0.78	0.74	0.63
frozen	retail wt	0.54	0.55	0.57	0.66	0.61
Beans, fresh	net wt canned	1.50	1.61	1.56	1.55	1.45
canned	retail wt	0.38	0.44	0.46	0.53	0.51
frozen	"	0.06	0.12	0.05	0.06	0.08
Peas, fresh	net wt canned	1.80	1.75	1.76	1.66	1.49
canned	retail wt	1.14	1.23	1.22	1.44	1.23
frozen	"	0.30	0.37	0.45	0.47	0.48
Beets, fresh	net wt canned	0.33	0.35	0.34	0.33	0.26
canned	retail wt	1.07	1.30	1.67	1.80	1.80
Cauliflower, fresh	"	3.65	3.81	4.11	4.30	4.45
Celery, fresh	"	2.00	2.16	2.32	2.10	2.29
Corn, fresh	net wt canned	2.20	2.25	2.16	2.26	2.16
canned	retail wt	0.37	0.62	0.54	0.55	0.57
frozen	"	1.60	1.80	1.86	1.81	1.94
Cucumbers, fresh	"	6.22	6.88	6.47	6.55	6.91
Onions, not processed	"	0.10	0.02	0.04	0.02	0.03
Asparagus, fresh	net wt canned	0.22	0.22	0.17	0.15	0.17
canned	retail wt	1	0.01	0.01	0.01	0.01
frozen	"	2.36	2.25	2.65	2.76	2.54
Rutabagas, fresh	"	0.69	0.83	0.97	1.01	1.11
Broccoli, fresh	"	0.15	0.18	0.19	0.20	0.27
frozen	"	0.09	0.05	0.08	0.09	0.15
Brussels sprouts, fresh	"	0.10	0.10	0.14	0.20	0.21
frozen	"	1.21	1.42	1.34	1.46	1.74
Unspecified, fresh	net wt canned	..	..	..	0.38	0.44
canned	retail wt	0.20	0.11	0.20	0.09	0.05
frozen						
MUSHROOMS	fresh equiv.	1.43	1.62	2.01	1.88	2.06
Fresh	retail wt	0.58	0.74	0.83	0.94	1.00
Canned	net wt canned	1.01	1.06	1.42	1.14	1.28
POTATOES	fresh equiv.	70.71	72.86	79.08	71.28	65.32
White	"	70.37	72.48	78.66	70.87	64.85
Sweet	"	0.35	0.38	0.43	0.41	0.47
MEAT	carcass wt	77.96	75.75	73.00	76.14	74.91
Pork	"	25.74	26.19	29.70	32.30	27.90
Beef	"	47.58	45.75	40.01	39.75	40.95
Veal	"	2.03	1.76	1.39	1.40	1.58
Mutton and lamb	"	1.02	0.84	1.05	0.79	0.71
Offal	"	1.59	1.21	0.85	1.90	1.38
Canned meat <sup>3</sup>	net wt canned	..	..	..	..	..
EGGS	fresh equiv.	12.70	12.38	12.86	12.67	12.45
POULTRY <sup>4</sup>	eviscerated wt	20.17	21.39	22.91	22.70	22.48
Chicken	"	14.61	16.00	17.69	17.18	17.00
Fowl	"	1.27	1.24	1.12	1.26	1.33
Turkey	"	4.29	4.15	4.10	4.26	4.15
Duck	"	..	..	..	..	..
Goose	"	..	..	..	..	..
FISH	edible wt	6.76	7.40	7.02	6.66	..
Fish and shellfish	"	4.57	4.93	4.88	4.78	..
fresh and frozen <sup>5</sup>	"	0.27	0.37	0.30	0.15	..
Fish, cured (smoked, salted, pickled)	"	1.92	2.10	1.84	1.73	..
Fish and shellfish, canned	"					
MILK AND CHEESE	milk solids	23.74	22.82	24.62	25.26	26.03
Cheddar cheese <sup>6</sup>	retail wt	1.66	1.09	1.47	1.75	1.95
Process cheese	"	2.71	2.98	2.81	2.92	2.97
Variety cheese	"	2.86	3.47	3.61	3.67	3.86
Cottage cheese	"	1.07	1.12	1.14	1.21	1.26
Evaporated whole milk	" (litre)	4.18	4.32	2.45	2.20	2.11
Condensed whole milk	" (litre)	0.35	0.36	0.36	0.55	0.55

### 9.30 Per capita supplies of food moving into consumption 1978-81 with average for 1974-78 (concluded)

Kind of food and weight base		kg per capita per annum				
		Average	1978	1979	1980	1981
		1974-78				
Powdered whole milk	"					
Other whole milk products <sup>7</sup>	" (kg)	.55	0.66	0.51	0.61	0.56
Powdered skim milk <sup>8</sup>	" (kg)	2.42	0.41	2.19	1.80	1.99
buttermilk	" (kg)	0.13	0.13	0.16	0.16	0.16
whey	" (kg)	1.79	2.22	2.11	2.13	2.45
Miscellaneous byproducts <sup>9</sup>	" (kg)	0.44	0.55	0.67	0.10	0.07
Standard milk	" (litre)	45.96	42.76	42.37	41.28	39.79
Ice milk	" (litre)	0.58	0.64	0.50	0.52	0.55
<b>BEVERAGES</b>						
Tea	tea leaf equiv.	1.15	1.03	0.98	1.02	0.93
Coffee	green beans	4.15	4.22	4.50	4.49	4.77
Cocoa	"	1.37	1.36	1.23	1.43	1.50

<sup>1</sup>Confidential.

<sup>2</sup>Includes pickles, relishes, vegetables used in soups.

<sup>3</sup>Per capita consumption not comparable with previous years.

<sup>4</sup>Excludes Newfoundland.

<sup>5</sup>Excludes herring, fresh and frozen, and all fish used for bait.

<sup>6</sup>Now includes allowance for manufacturing use.

<sup>7</sup>Includes formula milks, whole milk powder of less than 26% fat, evaporated milk of 2% fat, concentrated liquid milk and whole milk powder.

<sup>8</sup>Part of this product is used for animal feeds.

<sup>9</sup>Includes sugar of milk (lactose), special formula skim milk products, concentrated liquid skim milk. As of 1980 production of casein is no longer collected.

### 9.31 Supply, distribution and apparent consumption of meats

Item		1979	1980	1981	1982
<b>BEEF</b>					
Animals slaughtered	'000	3,433.8	3,525.7	3,699.2	3,797.0
Estimated dressed weight	t	917 848	938 780	980 243	988 811
On hand, Jan. 1	"	26 244	26 952	27 383	15 708
Imports for consumption	"	83 201	78 203	78 717	86 312
Total supply	"	1 027 293	1 043 935	1 086 343	1 090 831
Exports	"	51 939	65 003	79 232	82 772
On hand, Dec. 31	"	26 952	27 383	15 708	12 575
Apparent domestic consumption	"	948 402	951 549	991 403	995 484
Apparent per capita consumption	kg	39.9	39.5	41.0	40.4
<b>VEAL</b>					
Animals slaughtered	'000	533.3	531.3	571.1	621.3
Estimated dressed weight	t	29 613	31 926	36 108	40 189
On hand, Jan. 1	"	1 605	1 081	956	638
Imports for consumption	"	4 104	2 507	1 876	1 808
Total supply	"	35 322	35 514	38 940	42 635
Exports	"	527	443	21	465
On hand, Dec. 31	"	1 081	956	638	543
Apparent domestic consumption	"	33 714	34 115	38 281	41 627
Apparent per capita consumption	kg	1.4	1.4	1.6	1.7
<b>MUTTON AND LAMB</b>					
Animals slaughtered	'000	240.0	278.8	365.8	417.7
Estimated dressed weight	t	4 748	5 246	6 555	7 821
On hand, Jan. 1	"	3 392	3 623	3 055	1 972
Imports for consumption	"	21 043	13 835	10 018	10 475
Total supply	"	29 183	22 704	19 628	20 268
Exports	"	176	93	396	117
On hand, Dec. 31	"	3 623	3 055	1 972	1 828
Apparent domestic consumption	"	25 384	19 556	17 260	18 323
Apparent per capita consumption	kg	1.1	0.8	0.7	0.7
<b>PORK</b>					
Animals slaughtered	'000	12,000.8	13,977.5	13,681.8	13,446.1
Estimated dressed weight	t	736 689	856 315	840 371	832 601
On hand, Jan. 1	"	11 804	11 883	14 438	12 100
Imports for consumption	"	33 387	17 524	19 751	14 553
Total supply	"	781 880	885 722	874 560	859 254
Exports	"	79 553	117 939	128 998	163 363
On hand, Dec. 31	"	11 883	14 438	12 100	8 796
Apparent domestic consumption	"	690 444	753 345	733 462	687 095
Apparent per capita consumption	kg	29.0	31.3	30.3	27.9

### 9.31 Supply, distribution and apparent consumption of meats (concluded)

Item		1979	1980	1981	1982
OFFAL					
Estimated production	t	60 710	66 108	67 202	67 740
On hand, Jan. 1	"	4 578	4 670	5 066	5 054
Imports for consumption	"	6 153	2 886	4 494	2 369
Total supply	"	71 441	73 664	76 762	75 163
Exports	"	34 752	23 786	38 194	38 774
On hand, Dec. 31	"	4 670	5 066	5 054	4 856
Apparent domestic consumption	"	32 019	44 812	33 514	31 533
Apparent per capita consumption	kg	1.4	1.9	1.4	1.3

### 9.32 Number of farms by province, 1951-81 censuses

Province	1951	1961	1971	1976	1981
Newfoundland	3,626	1,752	1,042	878	679
Prince Edward Island	10,137	7,335	4,543	3,677	3,154
Nova Scotia	23,515	12,518	6,008	5,434	5,045
New Brunswick	26,431	11,786	5,485	4,551	4,063
Quebec	134,336	95,777	61,257	51,587	48,144
Ontario	149,920	121,333	94,722	88,801	82,448
Manitoba	52,383	43,306	34,981	32,104	29,442
Saskatchewan	112,018	93,924	76,970	70,958	67,318
Alberta	84,315	73,212	62,702	61,130	58,056
British Columbia	26,406	19,934	18,400	19,432	20,012
Canada	623,091	480,903	366,128	338,578	318,361

### 9.33 Use of agricultural land by province, 1976 and 1981 censuses (hectares)

Province and year		Improved land				Total
		Under crops	Improved pasture	Summer-fallow	Other	
Nfld.	1976	4 301	5 821	175	841	11 138
	1981	4 744	4 148	358	1 203	10 452
PEI	1976	158 448	38 764	2 343	4 227	203 783
	1981	158 280	36 228	3 027	5 153	202 688
NS	1976	111 666	42 447	2 909	11 653	168 676
	1981	112 782	46 106	5 154	13 941	177 982
NB	1976	137 069	40 245	1 868	9 536	188 719
	1981	130 526	41 479	5 183	14 742	191 931
Que.	1976	1 847 507	470 314	20 441	58 537	2 396 799
	1981	1 756 038	443 559	53 077	107 666	2 360 339
Ont.	1976	3 506 943	743 284	75 535	153 841	4 479 604
	1981	3 632 727	657 009	63 309	165 507	4 518 552
Man.	1976	3 847 546	311 280	934 097	123 807	5 216 731
	1981	4 420 369	352 507	598 338	132 766	5 503 980
Sask.	1976	10 600 917	909 188	7 186 653	232 213	18 928 871
	1981	11 740 864	975 364	6 704 464	263 163	19 683 855
Alta.	1976	7 639 441	1 326 420	2 628 215	264 099	11 858 175
	1981	8 441 242	1 581 443	2 205 468	297 329	12 525 481
BC	1976	489 614	175 696	67 641	40 499	773 450
	1981	568 241	266 884	63 528	47 677	946 330
Canada	1976	28 343 922	4 063 526	10 919 898	899 305	44 226 651
	1981	30 965 812	4 404 727	9 701 906	1 049 146	46 121 591

## 9.34 Farms classified by sales class and province, 1976 and 1981 censuses

Province and year		Number of farms with sales of							Institutional farms <sup>1</sup>	Total
		\$100,000 and over	\$50,000 – 99,999	\$25,000 – 49,999	\$10,000 – 24,999	\$5,000 – 9,999	\$2,500 – 4,999	under \$2,500		
Nfld.	1976	42	36	29	58	55	53	575	30	878
	1981	78	35	35	68	64	104	295	—	679
PEI	1976	149	224	367	727	543	514	1,146	7	3,677
	1981	381	414	473	569	386	362	569	—	3,154
NS	1976	244	313	368	494	480	620	2,900	15	5,434
	1981	515	388	342	601	634	689	1,876	—	5,045
NB	1976	147	271	403	570	501	597	2,045	17	4,551
	1981	383	423	382	477	501	536	1,361	—	4,063
Que.	1976	953	3,000	9,173	12,708	6,252	5,184	14,242	75	51,587
	1981	4,145	8,500	8,825	7,509	4,562	4,643	9,960	—	48,144
Ont.	1976	4,517	9,838	13,309	16,384	11,524	12,041	21,107	81	88,801
	1981	12,559	12,510	10,963	13,952	10,158	8,818	13,488	—	82,448
Man.	1976	973	2,711	5,877	9,164	4,912	3,628	4,787	52	32,104
	1981	3,191	5,530	6,394	6,308	3,053	2,041	2,925	—	29,442
Sask.	1976	1,695	8,070	18,299	23,242	9,586	5,366	4,416	284	70,958
	1981	5,813	15,453	18,961	15,392	5,773	2,950	2,976	—	67,318
Alta.	1976	2,692	5,732	10,231	15,851	9,892	7,499	9,062	171	61,130
	1981	7,327	9,873	11,049	12,003	6,387	4,525	6,892	—	58,056
BC	1976	937	1,114	1,252	2,294	2,044	2,369	9,384	38	19,432
	1981	2,154	1,346	1,748	2,802	2,487	3,060	6,415	—	20,012
Canada	1976	12,349	31,309	59,309	81,492	45,791	37,874	69,683	771	338,578
	1981	36,546	54,472	59,172	59,681	34,005	27,728	46,757	—	318,361

<sup>1</sup>In 1981 all institutional farms are included in their specific sales class.

## 9.35 Farms with sales of \$2,500 or more, classified by product type and province, 1981 Census

Product type	Province					
	Nfld.	PEI	NS	NB	Que.	Ont.
Dairy	58	768	830	733	19,161	12,841
Cattle	34	547	946	723	4,930	19,567
Hogs	26	255	196	117	3,331	4,984
Poultry	53	26	126	102	1,121	1,886
Wheat	—	5	11	8	300	692
Small grains (excl. wheat farms)	—	85	47	45	2,021	14,016
Field crops, other than small grains	20	462	74	438	1,008	3,190
Fruits and vegetables	87	53	449	231	2,107	4,335
Miscellaneous specialty	51	88	322	166	3,085	3,768
Mixed farms	55	296	168	139	1,120	3,681
Livestock combination	10	204	92	72	543	2,406
Field crops combination	1	48	9	22	99	163
Other combinations	44	44	67	45	478	1,112
Total	384	2,585	3,169	2,702	38,184	68,960
Product type	Province					
	Man.	Sask.	Alta.	BC	Canada	
Dairy	1,803	1,623	2,743	1,345	41,905	
Cattle	5,679	7,057	16,098	4,558	60,139	
Hogs	1,011	632	1,402	347	12,301	
Poultry	409	243	622	850	5,438	
Wheat	6,105	41,096	7,378	185	55,780	
Small grains (excl. wheat farms)	8,533	10,162	16,493	684	52,086	
Field crops, other than small grains	498	287	1,122	623	7,722	
Fruits and vegetables	88	28	76	2,815	10,269	
Miscellaneous specialty	592	444	1,574	1,550	11,640	
Mixed farms	1,799	2,770	3,656	640	14,324	
Livestock combination	1,152	1,691	2,515	369	9,054	
Field crops combination	107	10	112	15	586	
Other combinations	540	1,069	1,029	256	4,684	
Total	26,517	64,342	51,164	13,597	271,604	

### 9.36 Selected farm machinery, by number and province, 1976 and 1981 censuses

Type of machinery and year		Province					
		Nfld.	PEI	NS	NB	Que.	Ont.
Automobiles	1976	431	3,829	4,475	3,945	46,299	97,761
	1981	504	3,670	4,807	3,985	44,192	96,701
Motor trucks	1976	619	3,624	5,073	4,687	24,250	79,819
	1981	522	4,099	4,608	4,544	28,397	80,454
Tractors	1976	546	5,857	7,121	6,952	86,805	175,918
	1981	648	5,804	7,613	7,012	92,809	178,041
Grain combines	1976	1	1,287	335	805	6,131	25,475
	1981	1	1,161	302	768	6,876	25,134
Swathers	1976	8	129	195	282	6,901	11,814
	1981	31	220	328	413	7,517	12,890
Pick-up hay balers	1976	116	1,953	2,404	2,295	31,770	39,124
	1981	123	1,896	2,604	2,360	27,509	39,530
Forage crop harvesters	1976	14	354	376	340	6,104	15,799
	1981	24	407	417	393	7,632	16,351
		Man.	Sask.	Alta.	BC	Canada	
Automobiles	1976	30,571	62,312	55,212	18,975	323,824	
	1981	30,057	67,297	61,950	21,568	334,731	
Motor trucks	1976	49,844	141,754	112,836	21,863	444,390	
	1981	54,070	150,792	123,835	23,087	474,408	
Tractors	1976	67,077	140,535	118,987	25,229	635,055	
	1981	67,342	145,362	124,214	28,761	657,606	
Grain combines	1976	23,467	61,304	42,984	1,769	163,560	
	1981	22,631	59,704	42,663	1,870	161,110	
Swathers	1976	23,843	62,717	44,227	3,241	153,359	
	1981	24,291	67,588	47,601	3,729	164,608	
Pick-up hay balers	1976	14,173	31,017	31,483	5,439	159,778	
	1981	15,694	32,569	35,870	7,186	165,341	
Forage crop harvesters	1976	1,580	3,282	5,115	2,135	35,101	
	1981	1,383	2,498	4,440	2,211	35,756	

### 9.37 Farms classified by age of operator and province, 1976 and 1981 censuses

Province and year		Under 25 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-59 yrs	60-64 yrs	65-69 yrs	70 yrs and over	Total
Nfld.	1976	35	72	187	247	134	113	52	38	878
	1981	20	115	155	186	74	81	28	20	679
PEI	1976	68	485	769	949	454	412	277	263	3,677
	1981	119	523	667	786	369	300	212	178	3,154
NS	1976	79	690	1,036	1,381	712	689	416	431	5,434
	1981	90	778	1,120	1,232	591	521	370	343	5,045
NB	1976	105	573	817	1,188	622	580	356	310	4,551
	1981	102	675	863	967	522	439	261	234	4,063
Que.	1976	1,207	8,119	11,882	15,351	6,442	4,404	2,260	1,922	51,587
	1981	1,433	9,000	12,122	12,910	5,648	3,776	1,875	1,380	48,144
Ont.	1976	1,791	12,642	19,904	24,516	10,344	8,308	5,478	5,818	88,801
	1981	2,069	12,600	18,867	21,559	9,930	7,617	5,010	4,796	82,448
Man.	1976	1,596	5,284	6,438	8,478	4,007	3,266	1,752	1,283	32,104
	1981	1,428	5,800	6,253	7,008	3,455	2,718	1,689	1,091	29,442
Sask.	1976	4,828	11,333	13,714	18,385	8,863	6,912	3,809	3,114	70,958
	1981	4,105	13,595	12,818	15,366	7,876	6,484	4,074	3,000	67,318

9.37 Farms classified by age of operator and province, 1976 and 1981 censuses (concluded)

Province and year		Under 25 yrs	25-34 yrs	35-44 yrs	45-54 yrs	55-59 yrs	60-64 yrs	65-69 yrs	70 yrs and over	Total
Alta.	1976	2,164	9,978	14,662	16,546	6,908	5,217	3,058	2,597	61,130
	1981	2,011	10,419	13,664	15,075	6,568	5,045	3,005	2,269	58,056
BC	1976	280	2,741	4,935	5,518	2,101	1,716	1,057	1,084	19,432
	1981	291	3,029	5,175	5,456	2,315	1,641	1,111	994	20,012
Canada	1976	12,153	51,920	74,351	92,565	40,591	31,618	18,518	16,862	338,578
	1981	11,668	56,534	71,704	80,345	37,348	28,622	17,635	14,305	318,361

9.38 Farm capital by province, 1981 Census, and by year, 1951-81

Province and year		Total no. of farms	Value (\$'000,000)			Total capital value \$'000,000
			Land and buildings	Machinery and equipment	Livestock and poultry	
Newfoundland		679	93.7	12.5	9.5	115.6
Prince Edward Island		3,154	478.9	149.0	71.7	699.5
Nova Scotia		5,045	633.1	150.3	114.2	897.6
New Brunswick		4,063	440.6	141.7	85.0	667.2
Quebec		48,144	6,224.1	1,732.5	1,511.7	9,468.3
Ontario		82,448	25,298.8	3,462.1	2,522.3	31,283.2
Manitoba		29,442	7,835.7	1,823.6	791.6	10,451.0
Saskatchewan		67,318	25,048.2	4,916.9	1,403.5	31,368.5
Alberta		58,056	29,961.2	4,362.2	2,503.8	36,827.1
British Columbia		20,012	7,261.0	693.4	572.0	8,526.4
Canada		318,361	103,275.1	17,444.2	9,585.1	130,304.4
1951		623,091	5,527.2	1,933.3	2,010.4	9,470.9
1961		480,903	8,622.6	2,568.6	1,979.9	13,171.2
1971		366,128	16,936.0	3,909.2	3,221.3	24,067.9
1976		338,578	43,556.4	9,034.5	4,464.9	57,055.8
1981		318,361	103,275.1	17,444.2	9,585.1	130,304.4

9.39 Average farm energy expenditures,<sup>1</sup> by energy type, 1981 (dollars)

Province	Gasoline	Diesel fuel	Propane and/or butane <sup>2</sup>	Natural gas	Stove and furnace oil	Electricity	Other fuels <sup>3</sup>
Newfoundland	2,338	999	429	...	3,619	2,009	110
Prince Edward Island	1,950	1,747	519	...	865	1,251	400
Nova Scotia	1,946	1,437	508	...	1,995	1,317	635
New Brunswick	2,243	1,534	1,065	...	1,480	1,205	498
Quebec	1,199	1,157	3,757	...	1,484	1,180	180
Ontario	1,533	1,591	2,100	4,276	1,752	994	799
Manitoba	2,250	2,789	1,652	1,559	476	777	310
Saskatchewan	2,195	2,747	531	750	367	457	1,001
Alberta	2,503	2,734	545	1,054	524	796	347
British Columbia	1,775	1,767	578	2,543	608	1,037	425
Canada	1,995	2,209	1,212	1,467	830	841	562

<sup>1</sup>For farms with \$5,000 sales or more, expense for energy to operate the farming business, not for personal use.

<sup>2</sup>Liquid petroleum gas.

<sup>3</sup>Includes wood, heavy fuel oil, coal.

9.40 Farm operating expenses and depreciation charges (million dollars)

Item	1978	1979	1980	1981	1982 <sup>P</sup>
Taxes	177.0	185.0	205.2	227.6	246.0
Rent	383.1	465.2	584.8	623.0	678.2
Wages	726.8	820.7	912.9	1,073.3	1,138.1
Cash wages	699.8	787.4	882.0	1,050.9	1,114.1
Room and board	27.0	33.4	31.0	22.4	24.0
Interest	912.5	1,329.9	1,609.1	2,279.9	2,165.0
Total machinery	1,225.7	1,405.2	1,619.2	2,055.0	2,348.9
Fuel	534.1	615.5	722.4	999.0	1,228.8
Machinery repairs and other expenses	691.6	789.7	896.9	1,056.0	1,120.1
Fertilizer and lime	675.2	835.4	940.9	1,095.7	1,055.0

### 9.40 Farm operating expenses and depreciation charges (million dollars) (concluded)

Item	1978	1979	1980	1981	1982 <sup>P</sup>
Fertilizer	661.6	822.8	928.7	1,081.6	1,040.6
Lime	13.6	12.6	12.2	14.1	14.5
Other crop expenses	564.6	706.1	749.9	883.6	906.3
Pesticides	267.1	350.3	371.3	482.3	511.6
Seed	222.6	261.1	282.7	309.4	302.3
Irrigation	7.2	8.0	9.2	11.1	12.0
Twine, wire and containers	67.8	86.7	86.7	80.9	80.4
Feed	1,256.9	1,492.0	1,809.1	2,079.6	1,996.4
Other livestock expenses	505.1	656.6	703.5	569.3	657.6
Feeder cattle and weaning pigs	406.1	533.4	569.3	404.2	471.3
Breed association fees	4.2	4.1	5.8	6.4	7.2
A.I. fees and veterinary expenses	94.8	118.1	128.3	158.7	179.1
Repairs to buildings	195.4	214.8	224.2	251.2	269.0
Electricity and telephone	233.0	260.2	290.0	293.9	330.0
Electricity	181.3	202.7	225.6	225.5	255.7
Telephone	51.7	57.6	64.5	68.4	74.3
Miscellaneous	602.1	702.0	826.2	955.9	1,039.8
Total operating expenses	7,457.4	9,073.2	10,475.1	12,388.2	12,830.5
Depreciation	1,659.1	1,921.3	2,221.0	2,628.0	2,737.2
Buildings	312.9	361.4	426.2	547.6	541.9
Machinery	1,346.2	1,559.9	1,794.8	2,080.4	2,195.3
Total operating expenses and depreciation charges	9,116.5	10,994.5	12,696.1	15,016.2	15,567.8

### 9.41 Farm operating expenses and depreciation charges, by province (million dollars)

Province	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	15.0	18.6	23.4	27.8	28.3
Prince Edward Island	81.8	91.0	104.6	128.3	136.1
Nova Scotia	110.7	132.6	149.1	183.9	189.6
New Brunswick	88.7	99.8	121.4	149.8	156.7
Quebec	1,273.2	1,523.0	1,798.8	2,136.8	2,234.0
Ontario	2,784.8	3,341.7	3,799.3	4,155.4	4,227.9
Manitoba	850.8	1,050.1	1,216.0	1,425.3	1,479.9
Saskatchewan	1,675.7	2,036.1	2,359.1	2,859.3	3,046.1
Alberta	1,771.7	2,174.2	2,508.5	3,152.1	3,257.4
British Columbia	464.1	527.5	615.9	797.5	811.8
Total	9,116.5	10,994.5	12,696.1	15,016.2	15,567.7

#### Sources

9.1 - 9.6, 9.8, 9.11 - 9.23, 9.27 - 9.41 Agriculture Statistics Division, Statistics Canada.

9.7, 9.9, 9.10 *Grain trade of Canada*, Statistics Canada 22-201, *Grain*

*Statistics weekly*; *Visible grain supplies and disposition*, and *Exports of Canadian grain and wheat flour*, Canadian Grain Commission. Compiled in Commodity Markets Analysis Division, Department of Agriculture.

9.24 - 9.26 Food, Textiles, Chemicals and Miscellaneous Products Section, Manufacturing and Primary Industries Division, Statistics Canada.

CHAPTER 10

---

# **MINES AND MINERALS**



## UPDATE

---

After the sharpest downturn in its history, the Canadian mineral industry saw moderate growth during 1983. The value of output increased by over \$2 billion, reaching \$36 billion, 9.2% of the gross national product (GNP).

The value of fuels increased by 8.4% to nearly \$25 billion and of metals by 5.3% to \$7.2 billion. Non-metals declined marginally to \$1.9 billion and structural materials to \$1.7 billion.

The 10 leading minerals in 1983 were petroleum, natural gas, natural gas byproducts, copper, coal, gold, iron ore, zinc, nickel and cement. These 10 represented 87% of the total value of mineral output. All but natural gas, iron ore and cement showed increases over 1982.

Alberta produced the largest share, worth \$22.2 billion or 62% of the total value. Ontario followed with 10% of the total, reaching \$3.6 billion. With closure of some mining operations, value of output in Yukon dropped to \$59 million in 1983 from \$169 million in 1982.

---

<b>10.1</b>	<b>Canada's mineral industry</b>	<b>335</b>
10.1.1	Sectors of production	335
10.1.2	Export sales	336
10.1.3	Leading minerals	336
<b>10.2</b>	<b>Provincial and territorial summary, 1978-82</b>	<b>336</b>
<b>10.3</b>	<b>Commodity summary</b>	<b>338</b>
10.3.1	Metals	338
<b>10.4</b>	<b>Non-metallics</b>	<b>343</b>
<b>10.5</b>	<b>Structural materials</b>	<b>344</b>
<b>10.6</b>	<b>Manufactured metals</b>	<b>344</b>
<b>10.7</b>	<b>Government and the industry</b>	<b>345</b>
10.7.1	Tax incentives	345
10.7.2	Provincial aid	345
<b>10.8</b>	<b>Mining legislation</b>	<b>345</b>
10.8.1	Federal jurisdictions	345
10.8.2	Federal mining laws and regulations	345
10.8.3	Provincial laws and regulations	346
<b>10.9</b>	<b>Energy, Mines and Resources Canada</b>	<b>346</b>
10.9.1	Research and technology	346
10.9.2	Earth sciences	347
10.9.3	The energy sector	347

---

## TABLES

10.1-10.5	Mineral production, quantity and value	349
10.6-10.10	Producers' shipments of metals — copper, nickel, iron, steel, lead and zinc	352
10.11, 10.12	Shipments of gold and silver	354
10.13	Uranium oxide shipments	355
10.14-10.19	Industrial minerals — asbestos, potash, salt, sulphur, gypsum and nepheline syenite	355
10.20-10.23	Structural materials — cement, sand and gravel, stone and clay products	356

## CHARTS

Chart 10.1	Mineral production by commodity and region	337
Chart 10.2	Value of production, leading metals	339

## MINES AND MINERALS

### 10.1 Canada's mineral industry

Canada leads the world in value of mineral exports and ranks third among the diversified mineral producers in non-fuel mineral production behind the United States and the Soviet Union. The mineral industry has been a major factor in Canada's economic development and is still the main force in the northward advance of population and economic activity.

The industry is highly diversified, with over 60 different mineral commodities produced. It is also widely distributed with exploration and mining activities being carried out in all regions of Canada.

Representing almost 10% of Gross National Product the value of production of the mineral industry grew steadily from \$26.1 billion in 1979 to \$33.1 billion in 1982. The strongest growth took place in 1979 when the value of non-fuel production increased 33.4% and fuels 25.5% over the previous year. However, by early 1982 the effects of a worldwide economic recession were strongly felt. Value of non-fuel mineral production dropped 18.1% in 1982 compared with 1981. The fuel sector continued to show improvement but metal mining declined 18.8%, non-metal mining 20.4% and structural materials 11.0% from the previous year.

The 10 leading minerals represented from 77.0% to 79.0% of the total output by value over the four-year period from 1979 to 1982. They included petroleum, natural gas, coal, iron ore, copper, zinc, nickel, uranium, gold and silver.

Except for a few minerals such as tin, manganese, chromium, phosphate and bauxite, Canada produces most of its mineral requirements.

The mining sector performed strongly in 1979 and 1980 in terms of both output and level of employment, but as the economy moved into the recession, the combination of reduced demand and falling prices for mineral commodities weakened the sector's impact.

#### 10.1.1 Sectors of production

Mineral production is divided into four sectors: metallics, non-metallics, mineral fuels and structural materials. The percentage contribution of each of these groups to the total value of production in 1982 was as follows (1979 figures in brackets): mineral

fuels 60.4% (50.5%), metallics 21.0% (30.0%), non-metallics 6.2% (7.0%) and structural materials 4.7% (6.4%). The value of mineral fuels including coal, natural gas and petroleum represented an increasing share while the metallic sector dropped significantly over the four-year period. Key industrial sectors such as housing, construction and the automobile industry, the principal consumers of mineral products, were severely affected by the general economic recession by late 1980. As a result a widespread reduction in the demand for almost all mineral commodities in Canada and abroad forced production cutbacks and many temporary or permanent mine closures.

This downturn was reflected in the volume index of mineral production, which measures the mining industry's real output based on constant 1971 prices. In 1979 the index for total mines, quarries and oil wells measured 104.3, increasing to 108.1 in 1980 and dropping to 89.9 in 1982. The index for metal mines decreased 22% over the four-year period from 76.4 in 1979 to 59.5 in 1982.

Mineral prices showed wide fluctuation over the period. The most dramatic changes occurred in the gold market where the price (in Canadian funds) moved from an average of \$360 an ounce in 1979 to \$716 in 1980. It dropped to an average of \$460 in 1982, well below the high of 1980 but still high enough to make exploration and production profitable. The price of silver followed suit, approaching \$50 (Canadian) an ounce early in 1980 but dropping to an average of \$9.78 in 1982. Copper fluctuated from a high of \$1.30 a pound in September 1980 to an average of 88.24 cents a pound in 1982. Plagued with declining demand, prices of most major commodities fell, including nickel, zinc, lead, molybdenum and aluminum.

Capital expenditures on machinery and equipment and construction in the mineral extraction industries totalled \$5.6 billion in 1979, rose sharply to \$10.0 billion in 1981 and then dropped to \$9.5 billion in 1982. Investment in the fuel sector took by far the largest share of the total reaching \$6.6 billion in 1982. Investment in metal mines reached \$1.3 billion. All investment in mining including repair expenditures was \$12.0 billion in 1982, 12.3% of total Canadian investment in the economy.

### 10.1.2 Export sales

Mineral industry exports have traditionally contributed more than a third to Canada's total merchandise exports. Historically these exports were predominantly non-fuel materials, 80% or more in the mid-1960s. As energy prices increased in the early 1970s, energy exports became more significant, and in 1975 exceeded non-fuel mineral exports, accounting for 52% of total mineral exports. Then the value of energy exports declined, and in 1980 amounted to 40% of the total.

Exports of crude and fabricated mineral products totalled \$24.3 billion in 1982, of which 70.5% went to the United States, 7.6% to Japan and 9.4% to the European Economic Community. Of the total, \$14.1 billion were crude minerals representing 12.5% of total domestic exports. The value of mineral exports was down 6.7% from the previous year, reflecting the worldwide pervasiveness of the recession. Imports of crude and fabricated minerals dropped significantly to \$13.2 billion in 1982 from \$18.3 billion in 1981, contributing to an overall foreign merchandise trade surplus of \$18.3 billion, up from \$7.4 billion in 1981.

### 10.1.3 Leading minerals

Petroleum and natural gas production and refining in Canada represents the largest part of the mineral industry. Domestic production and exports are small in the world industry context but are of great significance to Canada. The industry's growth in the past two decades has been important because of its effect on the balance of payments, as a source of revenue to the several levels of government, and for its impact on engineering, construction and other industrial activity.

Total production of crude oil, natural gas and byproducts in 1982 was valued at \$20.9 billion, an increase of 43.2% over the 1979 value of \$14.6 billion. Crude oil production is concentrated in Alberta, with Saskatchewan second and minor production elsewhere. Generally, gas and oil are found together. Western provinces have the major proven reserves of gas.

The coal sector enjoyed renewed vitality over the four-year period with production and consumption up despite the recession. Volume of output reached 43 million tonnes in 1982, up from 33.2 million in 1979.

Canada ranked fourth in the world in copper production. British Columbia, Ontario and Quebec are the major producers. Volume of output was 12% lower in 1982 than in 1981 in response to reduced world consumption.

Shipments of iron ore in 1982 were 34.5 million tonnes, down from 49.5 million tonnes in 1981 and the peak level of 59.6 million tonnes in 1979. A severe decline in 1982 in the demand for iron and steel products forced the industry to operate at about 50% of annual capacity.

Canada is the largest nickel producer in the world. The commodity output measured 126 482 tonnes in 1979 and increased 54% to 184 802 tonnes in 1980. Problems of oversupply and reduced worldwide consumption however, brought production cuts in 1982. Volume of output fell 44.6% to 88 745 tonnes in 1982 compared with 1981.

Output of zinc reached 1.0 million tonnes in 1982 with a value of \$1.1 billion. The commodity fared better than most throughout the recession even though prices were less than half the pre-recession levels.

The gold industry exhibited an encouraging growth rate over the four-year period, increasing in value from almost \$591 million in 1979 to \$929 million in 1982.

## 10.2 Provincial and territorial summary, 1978-82

The value of mineral production in the provinces and territories generally showed rapid growth during 1979 to 1981 and then a sharp decline in 1982.

**Newfoundland.** Mineral production decreased by 7.2% from 1978 to 1982, primarily because of the shut-down in the province's iron ore mines. The value of all minerals in 1982 was \$626 million, down 39.3% from 1981. Production of iron ore, which normally accounts for over 85% of the total value of provincial output, fell 37.0% to \$559 million. Shut-downs of asbestos and base-metal mines also contributed to the decline.

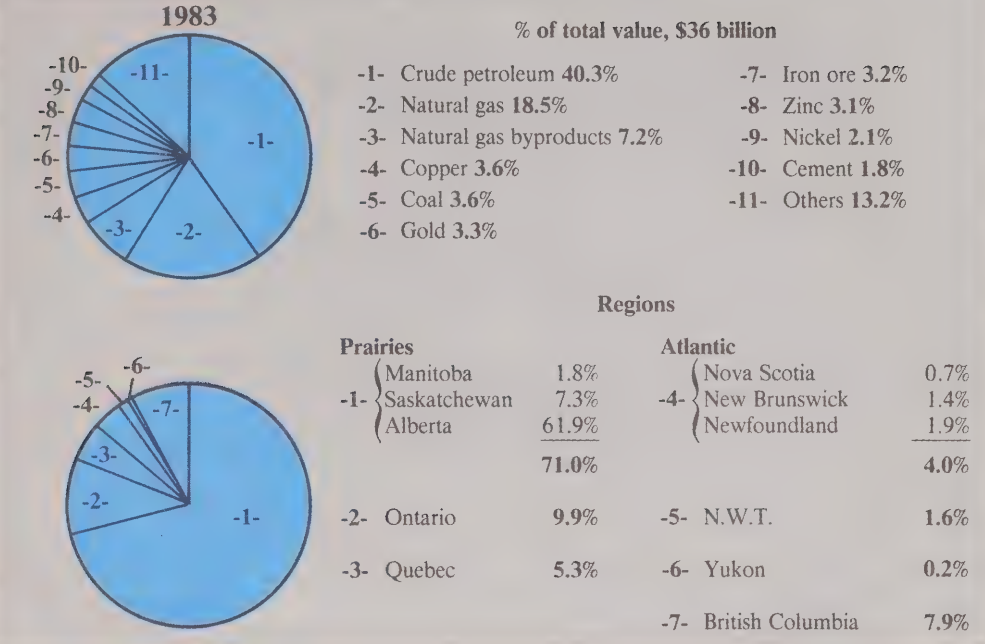
**Prince Edward Island.** The value of mineral production fell by 0.7% to \$2.1 million. The province produces only sand and gravel for local use.

**Nova Scotia.** The value of mineral production increased by 38.6% over the four-year period, reaching \$292 million in 1982. Coal was up 32.3% to \$170 million, but salt decreased 15.7% to \$31 million. Nova Scotia is Canada's largest producer of gypsum, second in salt and third in coal. Coal production capacity was being increased by the development of offshore coal deposits.

**New Brunswick.** The value of mineral production increased by 52.2% from 1979 to 1982. In 1982, mineral production declined 2.7% from 1981 to \$517 million. The value of zinc output declined 2.9% to \$265 million, and lead fell by 11.6% to \$59 million. New Brunswick is Canada's second largest producer of zinc and third in silver. Two potash mines were being developed and a third potash deposit was being explored. The start-up of a tungsten mine was delayed.

**Quebec.** Mineral production fell by 11.7% in the four-year period and 17.1% from 1981 to \$2.0 billion in 1982, mainly because iron ore fell 25.6% to \$446 million, asbestos fell 22.6% to \$325 million, and copper declined 11.1% to \$177 million. Gold was the only bright spot in the Quebec mineral industry,

Chart 10.1  
Mineral production by commodity and region



rising 13.1% to \$347 million; several new mines were opened and others were being developed. Reduced long-term world demand for iron ore forced the industry to contract, resulting in reductions in mine operating capacities and some permanent mine closures. Asbestos production was affected not only by the world recession, but also by adverse publicity and regulations limiting its use, resulting in mine closures.

**Ontario.** The value of mineral production increased by 17.6% over the four years. In 1982 production fell 23.7% from 1981. Metals fell sharply, with nickel down 58.9% to \$413 million and copper down 32.7% to \$336 million. Reduced demand for metals was forcing the industry to contract, resulting in extensive shut-downs and reductions in mine operating capacities, particularly those producing nickel. The most active sector of the industry was gold exploration, development and production; several new mines have been opened since 1978. The value of uranium was \$550 million, up 4.7% from 1981. Uranium mines were able to operate at capacity because of long-term contracts negotiated in previous years, even though prices fell sharply.

**Manitoba.** The value of mineral production increased by 11.2% in the four-year period. A number of small copper and zinc mines were opened

and nickel mines at Thompson were expanded. Layoffs and shut-downs took place throughout the mineral industry in 1982, and mineral production fell 20.4% from 1981 to \$511 million. Nickel dropped 28.3% to \$168 million, and copper fell 24.7% to \$93.7 million. Gold, however, increased by 3.5% to \$24 million, and petroleum was up 33.6% to \$85.9 million.

**Saskatchewan.** The value of mineral production increased by 38.5%, mostly because of potash mine expansions and petroleum price increases. But in 1982, mineral production in Saskatchewan declined 4.4% to \$2.2 billion, primarily because potash fell 36.8% to \$626 million as a result of intermittent mine shut-downs. Crude petroleum rose 29.6% to \$1.07 billion. The value of uranium in 1982 was relatively unchanged at \$265 million because the permanent closing of mining operations at Uranium City was offset by other mine expansions. Saskatchewan produces all of Canada's potash, almost all of the sodium sulphate, 33% of the uranium, and a large quantity of crude petroleum and coal. A major new uranium mine development was nearing completion in the north.

**Alberta.** The value of mineral production nearly doubled from 1978 to 1982, increasing by 99.8% mainly because of escalating prices for petroleum,

natural gas and sulphur, and because of new coal mine developments. In 1982 the value of mineral production increased 14.8% from 1981 to \$20.2 billion. Elemental sulphur decreased 7.3% to \$580 million. Coal rose 20.6% to \$393 million despite production cutbacks and shut-downs at mines dependent on offshore markets. Alberta produces 87.1% of Canada's fossil fuels and 96.7% of its elemental sulphur.

**British Columbia.** Mineral production from 1978 to 1982 increased 50.9% in value because of price increases for natural gas and increased coal production from new mine developments and expansions. Mineral production rose to \$2.8 billion in 1982, up 3.3% from 1981. The output value of copper fell 18.4% to \$520 million as a result of extensive mine shut-downs forced by low prices. Higher prices caused coal values to increase 17.4% to \$635 million, natural gas to increase to \$337 million, and crude petroleum to increase to \$325 million. British Columbia is Canada's largest producer of copper, coal, molybdenum and lead. Development of a northeast coal fields megaproject was nearing completion at a cost of over \$2 billion, with two mines producing 8 million tonnes a year, a modern town, a 130-km electric railway, and port facilities at Prince Rupert. One new mine began production in the established coal fields in the southeast, but industry-wide the volume of coal production declined in 1982.

**Yukon.** From 1978 to 1982 the value of mineral production fell 23.3%. This decline occurred toward the end of the period, as production in 1982 fell 28.7% from 1981. Extended shut-downs of two of Yukon's three base-metal mines caused zinc production to decline 32.8% to \$63 million, and lead to fall 52.6% to \$26 million. The effect of the shut-downs on the Yukon economy was serious, because in recent years the mining industry has been the largest single contributor to Gross Territorial Product, wages and salaries, and total employment.

**Northwest Territories.** The value of mineral production increased 33.8% to \$599 million, mainly because production of zinc increased 86.5% to \$298 million and lead, 31.8% to \$59 million. Gold increased 20.7% in value to \$103 million. These sharp increases were largely because new mines came on stream; the most significant were the Polaris lead-zinc mine on Little Cornwallis Island and the Lupin gold mine at Contwoyto Lake north of Yellowknife.

### 10.3 Commodity summary

**Mineral fuels.** Oil, natural gas, coal and uranium are summarized in Chapter 11, Energy. Areas of production of other minerals and an explanation of changes in other sectors are outlined here.

#### 10.3.1 Metals

**Copper.** Mine production of recoverable copper was 606 202 t in 1982, down 15% from 691 328 t in 1981 and down 15.4% from 716 363 t in 1980. British Columbia is the leading copper producing province with 44% of production in 1982, followed by Ontario with 28.5% and Quebec with 15%. With prices below production costs for nearly all Canadian copper producers, a number of mines were closed for weeks or months during 1982. By December, Canadian mine production rates were about 60% of normal.

Domestic consumption of copper was 96 694 t in 1982, 216 759 t in 1981 and 195 124 t in 1980. A substantial amount of "domestically consumed" copper is converted in Canadian plants to semifabricated forms such as sheet, tubing and wire and then exported.

Canada's largest copper refinery, in Montréal, was closed by a strike for 17 weeks in mid-1982. A copper refinery at Sudbury was shut down from May 1982 to year-end due to high inventories and poor markets for the associated nickel output.

Canadian copper ores were smelted at six locations: at Copper Cliff and Falconbridge in the Sudbury, Ont. district; at Noranda and Murdochville, Que.; at Flin Flon, Man.; and at Kamloops, BC. Initial production from a new copper smelter and refinery near Timmins, Ont. was achieved in November 1982.

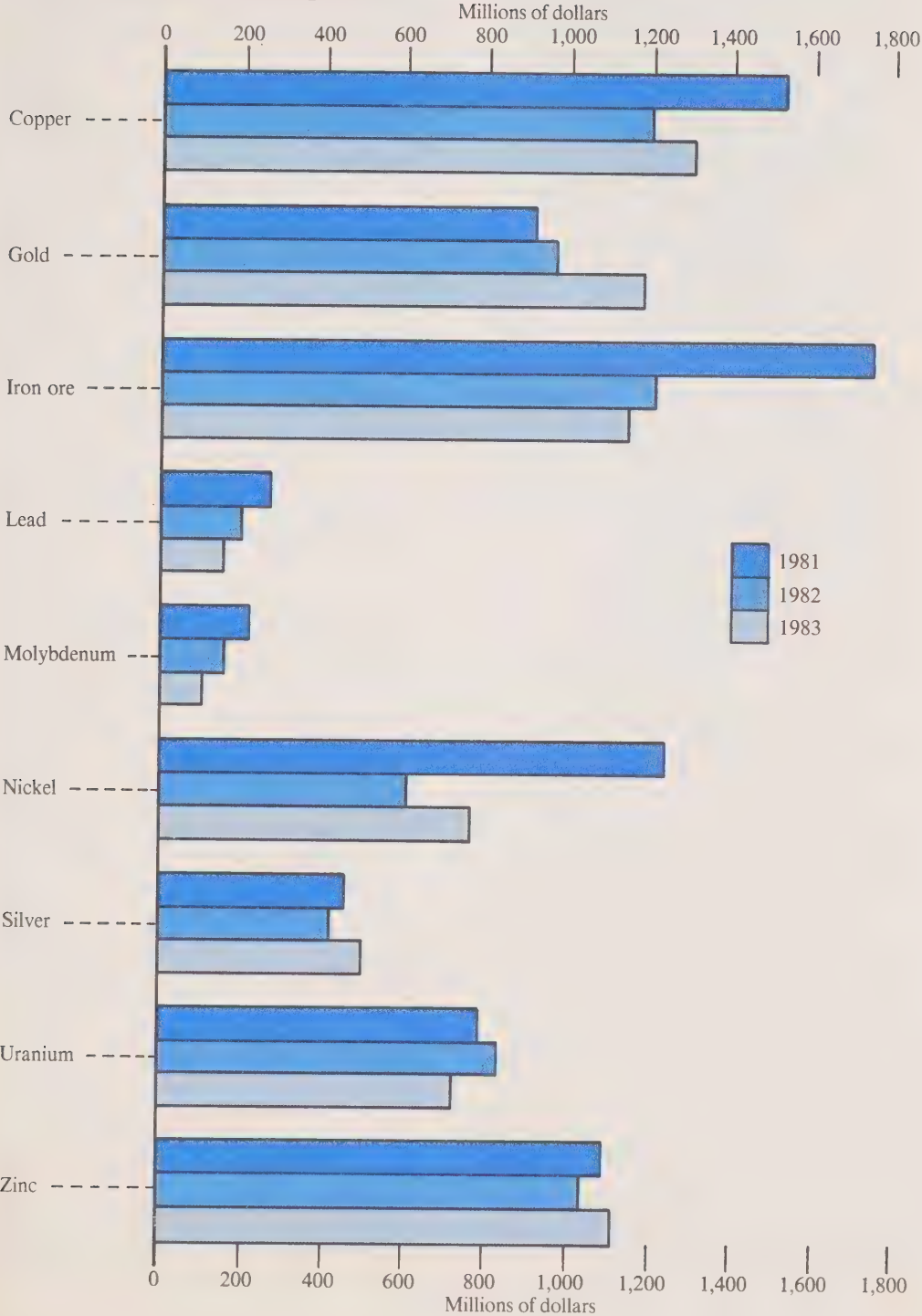
Copper markets in 1981 were depressed and in 1982 abysmal, with copper prices having dropped (in constant dollar terms) to their lowest levels since the 1930s. Planned expansion or development of new orebodies were deferred indefinitely. Mines near Baie Verte, Nfld., St. Anne des Monts, Que., Pickle Lake, Ont., Ashcroft, BC, and Whitehorse, Yukon closed permanently. At the end of 1982, a number of mines remained closed pending improved markets. Many mines still in production were operating at reduced rates.

**Iron ore** production declined from a peak of 59.6 million tonnes in 1979 to 34.5 million tonnes in 1982 mainly because of depressed steel production in Canada's two major markets: the United States and western Europe.

In Quebec-Labrador, the Schefferville iron ore operation was closed permanently in November 1982 because of declining demand for direct shipping ore. Other producers reduced output to conform with lower sales contracts. The Quebec government was considering alternatives concerning the future of an iron ore company in which it owns 50.1%; this company has had large financial losses for several years.

Production capacity in Ontario was reduced by about 5.7 million tonnes a year when four companies permanently closed their mining operations. The four

Chart 10.2  
Value of production, leading metals



remaining mines are owned by, and ship their output to the three integrated steel companies in Ontario.

British Columbia had one small iron ore mine and produced a small amount of byproduct iron from a copper operation. Byproduct production was terminated in 1982 with the depletion of ore reserves at the mine. The iron ore mine was expected to close late in 1983, also because of depleted ore reserves.

**Nickel.** Production was 126 500 t in 1979, rose to 184 800 t in 1980 and then declined to 88 700 t in 1982 when the industry was shut down for several months due to depressed market conditions.

Nickel was produced from mines at Sudbury and Shebandowan, Ont. and Thompson, Man. Refined nickel was produced at Sudbury and Port Colborne, Ont. and at Thompson. Production was about 80% of capacity in 1980, the year with the highest volume of output, and about 40% in 1982.

Resistance to corrosion, high strength over a wide temperature range, pleasing appearance and suitability as an alloying agent are characteristics of nickel which make it useful in a wide range of applications. The growing use in stainless steel in recent years now accounts for close to 50% of consumption, followed by nickel-based alloys, electroplating, alloy steels, foundry and copper-based alloys.

Close to two-thirds of nickel consumption is in capital goods and the remainder in consumer products. Nickel is used in chemical and food processing, nuclear power plants, aerospace equipment, motor vehicles, oil and gas pipelines, electrical equipment, machinery, batteries, as a catalyst, and in many other applications.

**Gold.** In 1982 Canadian gold production was 62.5 million grams valued at \$929.38 million, up from 52 million grams (\$922.09 million) in 1981 and 51.14 million grams (\$590.8 million) in 1979. The volume increased as a number of new mining operations, under development since the gold price surge of 1979-80, made their first contribution to production. Value of production increased by a lesser percentage than volume because the price declined. At the end of 1982 there were 39 producing gold mines operated by 30 companies.

Canada ranked third in the world as a gold producer, well behind South Africa and the Soviet Union. Quebec became the leading gold producing province in 1982, closely followed by Ontario. British Columbia ranked third and Northwest Territories fourth.

Gold production in Quebec amounted to 23.2 million grams in 1982 and 17.3 million grams in 1981, mostly from lode gold mines. Ontario gold production, mainly from lode gold mines, was 19.8 million grams in 1982 and 18.2 million grams in 1981. A major new gold discovery that will result in new gold mines was made at Hemlo, Ont. in 1982. In British Columbia gold was recovered as a byproduct of base-metal mining and from a number of lode gold

mines that came into production during 1979-82. British Columbia also reported production from placer mining. In Northwest Territories, production from the established lode gold mines near Yellowknife and from two new mines, one at Cullaton Lake and one at Contwoyto Lake, was 6.9 million grams in 1982 and 4.8 million grams in 1981. Gold production in the Prairie provinces, 1.9 million grams in 1982 and 1.6 million grams in 1981, was mainly a byproduct of the smelting of base-metal ores. One lode gold mine, a former producer near Bissett, Man. was returned to production. All gold produced in the Atlantic provinces was recovered as a byproduct of base-metal mining. In New Brunswick, gold showings were identified along the Bay of Fundy coast, north and south of Saint John. Gold production in Yukon was derived as a byproduct of base-metal mining and from placers. Placer mining yielded 2.5 million grams of gold in 1982 and is concentrated in the historic placer mining areas around Dawson City, Mayo and Burwash and has become a mainstay of the Yukon economy.

Gold is usually processed into bullion at the mine site, making it easily transportable. Bullion is refined to high purity metal at refineries in Toronto, Ottawa (the Royal Canadian Mint) and Vancouver. Base-metal refineries at Sudbury, Ont., Montréal, Que. and Flin Flon, Man. also refine gold recovered from ores.

**Zinc.** Canada is the world's largest producer and trader of zinc, providing about 25% of all zinc consumed in the western world. But mine production declined sharply in 1980, reflecting the weakened state of the world economy and the accompanying lower demand for zinc. Showing recovery, in 1982 Canadian mine output was 1.19 million tonnes. Production of refined zinc increased in 1981, but dropped during 1982 because of an extended strike and planned shut-downs. Consumption of refined zinc as measured by producer shipments was 120 000 tonnes in 1982, down somewhat from that of the previous years.

Four electrolytic zinc refineries in Canada have a total annual capacity of 675 000 tonnes. Cominco Ltd. completed a modernization and expansion program at Trail, B.C. Canadian Electrolytic Zinc at Valleyfield, Que. was increasing annual capacity by 9 000 t and Kidd Creek Mines at Hoyle, Ont. by 19 000 t.

Many Canadian mines have been forced to reduce or suspend production. A large mine at Faro, Yukon suspended production in June 1982 pending completion of a waste stripping program financed by Dome Petroleum and the federal government.

One of the few bright spots on the Canadian mining scene was the start-up in 1982 of a mine on Little Cornwallis Island some 130 km south of the magnetic North Pole. At full design capacity this mine will produce 130 000 tonnes per year (tpy) of zinc and 30 000 tpy of lead in concentrates.

Development continued of a new orebody near the Lynx and Myra mines on Vancouver Island. When completed in late 1984 its zinc production was expected to triple to about 50 000 t of zinc in concentrates a year.

**Silver.** In 1982, silver production was 1 204 000 kg valued at \$378.8 million, up in volume but down in value from \$458.1 million in 1981 and \$478.4 million in 1979. Canada is the world's fourth largest mine producer of silver after the Soviet Union, Mexico and Peru. Other major producers are the United States, Australia and Poland.

Increased mine production of silver in 1981 and 1982 over 1980 was attributed to byproduct silver production from new base-metal mines and to primary production from a new silver mine in central British Columbia beginning in the fall of 1981. Production in 1982 was adversely affected by a decline in the price of silver to less than US\$5.00 an ounce causing a silver-lead-mine at Elsa, Yukon to suspend operations for the second half of the year. Closure of the lead-zinc mine at Faro, Yukon also caused a loss of byproduct silver production.

The 16.6% decline in value in 1982 from 1981, despite a 6.6% increase in volume, was due to decline in price from US\$8.06 at the beginning of January to \$4.90 in mid-July. The price recovered to \$10.87 at the end of December.

Main sources of Canadian silver output are base-metal ores, accounting for about 70% of the total. The remainder comes from silver mines and base-metal mines whose primary product is silver, and as a byproduct of gold output.

British Columbia, the leading silver producing province, accounted for about 38% of Canadian mine production in 1982. Its silver comes mainly from one large silver mine and from a lead-zinc mine at Kimberly.

Ontario derives silver from small silver mines at Cobalt and a large base-metal mine at Timmins. Other major producing areas are the Sudbury and Sturgeon Lake districts.

New Brunswick is the major silver producing province in the Atlantic region from base-metal mines near Bathurst. Production of byproduct silver in Newfoundland has declined with the closure of base-metal mines.

In Quebec, silver is recovered as a byproduct from copper and zinc-copper mines.

In the Prairie region silver is produced at the copper-zinc mines near Flin Flon, Snow Lake and Leaf Rapids, Man.

In the Northwest Territories a silver mine at Port Radium on Great Bear Lake closed in early 1982. Some silver is recovered from a base-metal mine on Baffin Island. A copper-silver mine near Whitehorse in Yukon closed permanently due to depletion of ore reserves at the end of 1982.

Refined silver is produced at six Canadian primary refineries: in Montréal, Que. Trail, BC, Copper Cliff, Cobalt and Ottawa (the Royal Canadian Mint), Ont., and Belledune, NB.

**Lead.** Production recovered to 341 000 t in 1982 after decreasing from 342 000 t of lead in concentrates in 1979 to 296 000 t in 1980. About 40-50% of this production was exported, largely to Europe, Japan and the United States. The remainder was processed at Canada's two primary lead smelters/refineries at Trail, BC (145 000 tpy capacity) and at Belledune, NB (72 000 tpy capacity).

Production of refined lead from ores and concentrates dropped from 184 000 t in 1979 to 163 000 t in 1980 and then recovered to 174 000 t in 1982. In addition, lead metal production from recycled batteries and other lead scrap contributed about 70 000 tpy. Domestic consumption, as measured by producers' shipments, ordinarily takes about 48% of total production of lead metal, both primary and secondary. But in 1982 domestic consumption dropped to 93 000 t, only 39% of production.

Major changes among lead producers reflected continuing difficulties in the non-ferrous mining industry. A Buchans, Nfld. zinc-lead-copper-silver mine ceased milling ore in December 1981 but continued mine exploration through 1982 in an effort to bolster declining reserves. The two lead producers in Nova Scotia closed in 1981 with little chance of reopening. This loss and suspended production of the lead-zinc mine at Faro, Yukon were offset to some extent by the opening of the Polaris mine on Little Cornwallis Island, NWT. (See Zinc.) Its production in 1982 was 30 000 t of lead (metal content of concentrates).

**Platinum group metals.** Canada ranks third in world platinum metals production, well behind South Africa and the Soviet Union. Production of these metals in 1982 was 8.6 million grams valued at \$98.9 million, down from 11.9 million grams (\$136.2 million) in 1981, and 12.6 million grams (\$159.1 million) in 1980. The two major producers at Sudbury, Ont. closed for the second half of 1982 because of low prices and weak demand in nickel markets. Canada produces platinum metals as a byproduct of nickel refining. When nickel matte is refined electrolytically, the platinum group metals — platinum, palladium, rhodium, ruthenium, iridium and osmium — are concentrated in the residue. The upgraded residue, or sludge, is sent to refineries in Britain and the United States where the platinum metals are recovered.

Prices of all the platinum group metals peaked in early 1980, subsided through 1981, reached low points in mid-1982 and then recovered somewhat. The producer price of platinum remained at US\$15.27 a gram during the period, but the dealer

market price fell to \$7.93 a gram in June 1982 before recovering to \$12.80 at year end. At the end of 1982 the market price per gram for palladium was \$2.93; iridium, \$10.61; rhodium, \$8.63; ruthenium, \$1.16 and osmium, \$4.26.

**Molybdenum.** Canada is the western world's largest molybdenum producer, accounting for about 18% of its production in 1982. Molybdenum shipments increased from 11 889 t in 1979 to 15 232 t in 1982. Value of shipments declined in both 1980 and 1981 but rebounded in 1982.

Molybdenum was in tight supply worldwide in 1979, partly because of strikes at Canadian mines. In 1980 the market situation changed sharply. Consumption decreased in the recession while production continued to increase. By 1982, a rapid inventory build-up and depressed market led Canadian producers to cutback production and lay off mine workers. Molybdenum mines were operating at only 55% of capacity at the end of 1982.

Canadian molybdenum production capacity increased 33% in 1981, with two new mines and an expansion of two others in British Columbia.

About 95% of Canadian molybdenum is produced in British Columbia, with Quebec the only other producing province. It is derived both from primary molybdenum mines and as a byproduct or co-product of copper mines.

**Cobalt.** Shipments of cobalt declined by almost 30% in 1982, after marginal changes in 1981 and an increase of 29% in 1980. The value of shipments showed a similar pattern, down in 1982 to about one-third the value of 1980. In Canada, cobalt is recovered principally as a byproduct from nickel-copper ores.

Canada's leading producer recovered cobalt as oxide and hydrates at nickel refineries in Thompson, Man. and Port Colborne, Ont. The oxide was further processed at a Clydach, Wales refinery into upgraded oxides and salt compounds. The hydrates were shipped for toll-refining in Norway. Production of cobalt salts was discontinued in the Clydach refinery at the end of 1982.

A \$25 million electrolytic refinery at Port Colborne was scheduled for start-up in 1983. The new plant, replacing the cobalt oxide production line, will have an annual-capacity of 907 t of cobalt metal a year.

Cobalt metal, from nickel matte produced in Canada, was recovered at a refinery in Kristiansand, Norway. Cobalt metal powder was produced by a hydrometallurgical refinery at Fort Saskatchewan, Alta. which treats nickel-copper concentrates from domestic and imported sources. Refining capacity at both locations was increased in response to growing demand for toll-treatment services.

**Magnesium.** The only Canadian producer of primary magnesium operates a mine and smelter at

Haley, Ont. 80.5 km west of Ottawa. Its production statistics are confidential. Reduced demand caused world production to fall in 1982, but the United States remained the largest single producer, accounting for over 40% of the total world production.

Exports of Canadian magnesium metal have entered the United States duty-free under a Canada/US defence production sharing program but on a reduced scale over the past few years. Exports of unwrought Canadian magnesium otherwise faced a 16.5% tariff when entering the US domestic market in 1982 while the comparable Canadian import tariff is 4.8%. This US duty on unwrought magnesium is being reduced progressively to 1987 in accordance with the General Agreement on Tariffs and Trade. Only in certain high-purity applications can the Canadian product best compete in the United States.

**Columbium.** Shipments of columbium pentoxide declined slightly in 1980 but increased by about 11% a year in both 1981 and 1982 as a result of an expansion program by Canada's only columbium producer at Chicoutimi, Que. The mine at Chicoutimi is one of three pyrochlore operations in the world; the other two are in Brazil.

**Tantalum.** Production of tantalum is derived from a mine and mill at Bernic Lake, Man. An expansion program in 1980 raised mill capacity and provided for the treatment of lower grade ore and tailings. But shipments from the mine declined significantly between 1979 and 1983 as a result of a sharp reduction in demand worldwide. Part of the deteriorating demand was attributed to substitution and reduced consumption in the late 1970s when tantalum prices were high.

The mine was closed for one month during the summer of 1982 because of high inventories. Deteriorating market conditions led to a decision to close the mine in December 1982 for at least one year.

**Cadmium.** Production in all forms decreased from 1 209 tonnes valued at \$8.6 million in 1979 to 739 tonnes valued at \$2.2 million in 1982. Refined metal production declined from 1 455 tonnes to 1 109 tonnes. Most zinc ores in Canada and zinc concentrates contain recoverable cadmium. The largest production comes from mines in Ontario, British Columbia and Quebec.

Metallic cadmium is recovered as a byproduct at electrolytic zinc plants at Trail, BC, Flin Flon, Man., Valleyfield, Que., and Timmins, Ont. Total capacity of these plants to produce primary cadmium metal is 1 700 tonnes a year.

**Tungsten.** Production increased to a record 4 010 t of tungsten trioxide in 1980 following the doubling of capacity at Canada's main mine in Northwest Territories. A seven-month strike at this mine severely reduced production in 1981. Production

rebounded to 3 580 t of trioxide in 1982, although the rate of output had been reduced to 70% of capacity by year-end in response to poor market conditions.

In late 1981, a small 100 t a day tungsten mine was put into production in British Columbia. Intermittent production continued until late 1982 when the operation was shut down due to depletion of ore reserves. Total output amounted to 150 t of tungsten trioxide.

Development of a tungsten/molybdenum deposit at Mount Pleasant, NB was expected to be completed by mid-1983. This new producer was designed to mine 650 000 t of ore a year, from which an estimated 1 800 t of tungsten trioxide and 600 t of molybdenum disulphide would be recovered.

Exploration and preliminary engineering work continued on a tungsten deposit on the Yukon-Northwest Territories boundary.

## 10.4 Non-metallics

**Asbestos.** Canada ranks second after the USSR in world asbestos production and accounts for 25% (1981) of world output. Canadian shipments of asbestos fibre were 820 000 tonnes valued at \$403 million in 1982, continuing a downtrend since 1979 when shipments were 1.49 million tonnes valued at \$607 million. All Canadian production consists of chrysotile and in 1982 about 89% was from Quebec, 9% from British Columbia and 2% from Newfoundland. The only mine in Newfoundland was closed for most of the year.

Canada is the world's largest exporter of asbestos, shipping about 95% of its production to more than 70 countries. The United States is the largest market, accounting for more than 25% of Canadian exports, followed by Japan, the Federal Republic of Germany, France and Britain. These five countries consumed nearly 60% of Canadian exports in 1982.

General weakness in markets persists because of recessionary conditions, stricter environmental regulations, product substitution and adverse publicity mainly arising from health hazards associated with past exposure to asbestos dust in the workplace. Future demand for asbestos will mainly depend on the extent of world economic recovery and the degree to which world public opinion regards asbestos as a current health problem.

**Clay and clay products.** During a four-year period from 1979, value of shipments of clay and clay products from domestic sources decreased by 22% to \$94.7 million in 1982. Deposits of clay for use in the manufacture of papers, refractories, high quality whiteware and stoneware products are scarce in Canada; many of these products, as well as china clay (kaolin), fire clay, ball clay and stoneware clay are largely imported. Common clays and shales, relatively higher in alkalis and lower in alumina, are

used to manufacture heavy clay products such as brick and tile.

**Potash.** Canada is the world's largest exporter of potash. Shipments in 1982 were 5.2 million tonnes (potassium dioxide equivalent) valued at \$625 million, down because of the recession from a peak of 7.2 million tonnes (\$1,020 million) in 1980. In 1982 the industry operated at 60% capacity. There are eight mines, all in Saskatchewan, with four controlled by the Saskatchewan Potash Corp., a provincial government Crown corporation directing 40% of capacity.

About 95% of world potash output of 27 million tonnes is used in fertilizer, the balance for industrial purposes.

In New Brunswick the first potash mine was put into production in 1983 and another mine was announced for 1986.

**Salt.** Shipments in 1982 amounted to 8.1 million tonnes valued at \$161 million. About 70% of the total was rock salt used for snow and ice control on streets and highways and for chemical manufacturing. The remainder is fine vacuum evaporated salt and salt in brine used for production of caustic soda and chlorine.

Four rock salt mines include two in Ontario, one in Nova Scotia and a new one in Îles de la Madeleine, Que. A company operating a potash mine in New Brunswick also produces byproduct salt. Fine salt evaporator plants and brining operations are in Nova Scotia, Ontario, Manitoba, Saskatchewan and Alberta.

**Sulphur.** Canada has been the world's largest exporter of elemental sulphur since 1968. Shipments peaked in 1981 at 8.0 million tonnes valued at \$648 million. In 1982, sales declined to 7.1 million tonnes and \$600 million. The price of elemental sulphur increased from \$18.33 to \$90.30 a tonne f.o.b. (free on board) Alberta from 1978 to February 1982, then fell to \$75.00 a tonne by year end.

Canadian sulphur in elemental form is obtained as a byproduct in the production of sour natural gas, in the extraction of oil from tar sands and in the refining of petroleum. Sulphur dioxide, produced in the roasting of sulphide ores of nickel, copper, zinc and iron, is recovered as byproduct liquid sulphur dioxide and as sulphuric acid at several Canadian smelters. In addition to these involuntary producers of sulphur a small amount of pyrite is roasted expressly for sulphuric acid.

In 1981 and 1982 about 91% of sulphur shipments was in elemental form with 80% going offshore and more than half the remainder going to the United States.

Canadian production of sulphur peaked in 1973, yet during the period 1968 to 1978 production exceeded shipments by such an amount that stockpiles of elemental sulphur reached 21 million

tonnes. Since 1979 stocks have been reduced to 15 million tonnes as shipments have exceeded production.

Reduction of stockpiles is expected to continue because the production of sulphur from sour gas is declining while the demand for sulphur is increasing.

**Nepheline syenite.** Canada is the world's largest producer of nepheline syenite, from two operations on Blue Mountain, 40 km northeast of Peterborough, Ont. Shipments totalled 518 000 t in 1982 and 588 000 t in 1981. In spite of the drop in shipments the value increased to \$17.3 million from \$16.8 million in 1981 due to sales of higher priced finely ground product. In 1982, 80% was exported of which 90% went to the United States. Nepheline syenite is preferred to feldspar as a source of essential alumina and alkalis in glass manufacture. Other uses include the manufacture of ceramics, enamels, paints, papers, plastics and foam rubber.

## 10.5 Structural materials

Total value of construction in Canada showed a steady increase in current dollars for many years until 1982 when a 2% decrease was recorded. Construction has represented, on average, 17% of Gross National Product. In 1982 this share was down to 16%. Housing starts, traditionally a more visible sign of construction, in 1982 were the lowest since 1962 at only 125,860 units. This is down from a high of 273,203 in 1976.

Production of the mineral materials used by the construction industry reflects demand from both domestic and foreign construction activity.

**Gypsum.** The Canadian gypsum industry has not only supported the Canadian demand for wallboard but has supplied over 25% of US requirements for crude gypsum. Canadian production is principally from quarries operated by subsidiaries of US gypsum products manufacturers in Nova Scotia and Newfoundland. A steady decline from over 8 million tonnes in 1979 to about 6 million tonnes in 1982 reflects the slump in the building sector. A strong recovery late in 1982 was expected to carry through 1983.

The Canadian cement industry developed US markets for clinker and cement through the 1970s. Peak demand to date came in 1979 when production was 13.3 million tonnes of clinker and cement combined for a total value over \$720 million. The Canadian industry has the capacity to produce 15.9 million tonnes a year from a total of 23 plants. Thus production in 1982 at 8.1 million tonnes was only slightly more than 50% of capacity. Energy conservation programs in the Canadian industry reduced the energy consumption of output in 1981 to about 84% of what it was in 1974. Plants utilizing a dry process now constitute over 70% of Canadian capacity.

Production of the mineral aggregates, sand, gravel and crushed stone, generally reflects fluctuating demand from the construction industry. Since 1979 a steady decrease from 390 million tonnes to 270 million tonnes reflected the reduced activity in engineering construction in particular. Pits and quarries, in order to be competitive, must be as close to the consumer as possible because of the high costs associated with transporting high bulk material of low value. Producers are vulnerable to the demands of expanding urban communities for environments free of dust and noise and must also adhere to strict rehabilitation regulations.

Although dimension stone for use in building and ornamental work constitutes only 1% of total Canadian stone production, it is anticipated that a revival in demand for building construction stone, along with new cutting technology, could result in a revitalized industry.

## 10.6 Manufactured metals

**Aluminum.** Canadian aluminum smelters operated at an average of 90% of their rated capacities in 1982. Production increased from 1979 to 1982, peaking in 1981. World production peaked in 1980 and then decreased with world economic slowdown. Canada, due to relatively less expensive electric power supplies, operated at higher than average rates as aluminum prices fell from 1980 to 1982. Canadian consumption decreased steadily from 1979 to 1982.

Two companies operate primary aluminum smelters. One of them has five smelters in Quebec at Jonquière, Isle-Maligne, Grande Baie, Beauharnois and Shawinigan, and one at Kitimat, BC with a combined annual capacity of 1 018 000 t of aluminum in 1982. The same company also operates an alumina refinery at Jonquière to supply some of its Quebec smelters. The other company has a smelter at Baie-Comeau, Que., with an annual capacity of 158 760 t.

The first 57 000 tpy potline of a new smelter at Grande Baie, Que. was completed in July 1981. A second 57 000 tpy potline was completed in 1982 but would remain on standby until market conditions improve, as would the third potline which was expected to be completed in early 1983. The Baie-Comeau smelter was increasing its aluminum capacity to 272 000 tpy by modernization and expansion at a cost of about \$500 million. Studies were under way on possible new smelters in Newfoundland, Quebec, Manitoba and British Columbia.

**Iron and steel.** The Canadian steel industry had extreme shifts in demand for its products during the 1979-82 period. Although 1979 was a year of peak demand and customers were placed on allocation, 1982 ended in a post-depression low. Operating rates approached capacity limits during both 1979 and the

first half of 1980 but fell to 45% of capacity at the end of 1982. Employment declined 27% by December 1982. Production of crude steel declined from 15.85 million tonnes in 1979 to 11.76 million tonnes in 1982.

Spending on construction and equipment totalled \$2.1 billion during the period. Most steel companies modernized their facilities and expanded production capacity. A significant part of capital expenditure was for a new integrated steel complex near Nanticoke, Ont., built at a cost of \$1.2 billion; production of crude steel began in June 1980. Electric furnace based mini- and market-mills in Ontario and Western Canada completed major expansion and modernization projects during these four years.

The low value of the Canadian dollar relative to the US dollar stimulated the export of Canadian steel products to the United States, a market accounting for 70% to 80% of Canadian steel exports. Exports normally account for about 20% of Canadian producer shipments.

Declining demand for Canadian steel was directly related to world economic conditions and in part to an excess supply of steel on world markets. Canadian prices fell as a result of weak demand and the availability of low-priced imports.

Canada was not alone in this situation. Exports of steel to North America increased significantly, prompting North American producers to initiate investigations into suspected dumping and subsidization practices. Many findings of these investigations were positive and resulted in the imposition of additional duties or import quotas.

## 10.7 Government and the industry

### 10.7.1 Tax incentives

Although mineral industry enterprises are subject to federal income tax, certain benefits granted under the Income Tax Act serve as incentives to exploration and development. Up-to-date information on income tax allowances which apply to the mining industry may be obtained from Revenue Canada, Taxation and appropriate provincial tax offices.

### 10.7.2 Provincial aid

Provincial departments support exploration and mining activities with geological, geochemical and geophysical surveys, reports and maps. Generally, they encourage development of mineral resources; co-operate with the Geological Survey of Canada and other federal government agencies; publish data, reports and maps; issue permits for prospectors or miners and record mining claims.

## 10.8 Mining legislation

### 10.8.1 Federal jurisdictions

The issue of ownership of offshore mineral rights underlying eastern coastal waters in Canada's

continental limits had not been resolved between the federal government and the involved provinces in 1982. In western coastal waters, the issue of control of offshore minerals with British Columbia also had not been entirely resolved. The Supreme Court of Canada in an opinion of November 1967 stated in part that, as between Canada and the province of British Columbia, Canada has proprietary rights in and legislative jurisdiction over "lands, including the mineral and other natural resources, of the seabed from the ordinary low-water mark on the coast outside the harbours, bays, estuaries and other similar inland waters, to the outer limit of the territorial sea of Canada."

The department of energy, mines and resources (EMR Canada) has federal responsibility for administration and enforcement of legislation and regulations relating to mineral resources off Canada's coasts, in the Hudson Bay and Hudson Strait regions, and for federally owned mineral rights that become available for development in the provinces. The department of Indian and northern affairs (INA Canada) is responsible for mineral rights in Yukon and Northwest Territories and in Canada's Arctic offshore regions.

Mineral rights of Indian reserves in the provinces are administered by INA Canada in consultation with Indian band councils. Rights to a reserve may be taken up only after the band has approved development through a referendum vote. The minerals are then administered under special oil and gas or mining regulations. The Indian oil and gas regulations allow disposal of rights by public tender in permits or leases. The mining regulations provide for disposal on terms negotiated with the Indian band council.

### 10.8.2 Federal mining laws and regulations

Mining exploration and development is carried out in Yukon under the Yukon Quartz Mining Act and the Yukon Placer Mining Act. In Northwest Territories, including Arctic coastal waters, operations are governed by the Canada mining regulations. Regulations for placer-gold dredging, coal mining and quarrying are common to both territories. In Yukon, mining rights may be acquired by staking claims. A one-year lease may be obtained to prospect for the purposes of placer mining, renewable for additional one-year periods; a 21-year lease, renewable for a like period, may be obtained under the Yukon Quartz Mining Act.

Under Canadian mining regulations, a prospector must be licensed. Staked claims must be converted to lease or relinquished within 10 years. In certain areas, a system of exploration over large areas is allowed by permit. Any individual 18 years of age or more or any joint stock company in Canada may hold a prospector's licence. No lease is granted to an individual unless the applicant is a Canadian citizen. No lease is granted to a corporation unless it is

incorporated in Canada and at least 50% of the issued shares are owned by Canadian citizens or the shares are listed on a recognized Canadian stock exchange. A new mine beginning production is not required to pay royalties for 36 months.

### 10.8.3 Provincial laws and regulations

In general, Crown mineral lands within provincial boundaries (with the exception of those in Indian reserves, national parks and other lands under federal jurisdiction) are administered by the province.

Granting of land in any province except Ontario no longer carries with it mining rights on or under the land. In Ontario, mineral rights are expressly reserved. In Nova Scotia, the only mineral rights belonging to the owner of the land pertain to gypsum, agricultural limestone and building materials. In Newfoundland, mineral and quarry rights are expressly reserved. Some early grants in the four western provinces, and in New Brunswick, Quebec and Newfoundland included certain mineral rights. Otherwise, mining rights must be obtained separately by lease or grant from the provincial authority. Mining activities may be classified as placer, general minerals (veined minerals and bedded minerals), fuels (coal, petroleum and gas) and quarrying.

In provinces where placer deposits occur, regulations define the size of placer holdings, the terms under which they may be acquired and the royalties to be paid.

**General minerals** are sometimes described as quartz, lode, or minerals in place. The most elaborate laws and regulations apply in this division pertaining to prospector or miner licences to search for mineral deposits, staking and recording claims, time limits, recording fees where required, work of a specified cost to be performed in some provinces, and renewals of development licences. Mining taxation is applied most frequently as a percentage of net profits of producing mines.

**Coal, petroleum and natural gas.** In provinces where coal occurs, specifications include the size of holdings, and their conditions of work and rental. In the search for petroleum and natural gas, an exploration permit or reservation is usually required; in Saskatchewan, Alberta and British Columbia leases usually follow when a discovery of oil or gas is made; exploration costs may be applied to the lease rental. In other provinces, discovery of oil or gas is usually a prerequisite to obtaining a lease or grant of a limited area, subject to carrying out drilling obligations and paying a rental, a fee, or a royalty on production.

**Quarrying regulations** define the size of holdings and the terms of lease or grant concerning quarryable substances (ordinary stone, building and construction stone, sand, gravel, clay, limestone and peat moss). In several provinces, such substances belong to the owner of the land, but regulations vary. Copies of

mining legislation including regulations and other details may be obtained from provincial authorities.

## 10.9 Energy, Mines and Resources Canada

The department of energy, mines and resources was created in October 1966 from the former department of mines and technical surveys. It has jurisdiction over federal matters related to energy, mines, minerals and other non-renewable resources, technical surveys and explosives. The department is responsible for federal mineral and energy policies and for conducting technical surveys and research related to mineral and energy resources. The surveys and research are conducted in three sectors: research and technology, earth sciences and energy.

### 10.9.1 Research and technology

This sector is responsible for research and development in mining, minerals, metals and fuels technologies, remote sensing and explosives. The work is conducted in-house and by contract in three branches: a Canada centre for mineral and energy technology (CANMET), a Canada centre for remote sensing (CCRS) and an explosives branch.

**CANMET** programs in mining R&D are aimed at mine safety and the development of new mining technologies. Mine safety R&D investigates reduction of emissions from diesels operating underground, control of radiation in uranium mines, explosions in coal mines, and mine dusts and noise. Important to both safety and production technology are ground control and rock mechanics to increase stability in mines, minimize rockfalls and enhance productivity. CANMET also conducts explosives research and testing on behalf of the explosives branch.

Research on processing of minerals is aimed at improving the efficiency of current techniques by developing computer simulation of processes for application to specific mills to maximize operating efficiency. R&D is also conducted to develop processes for Canadian ores such as fine-grained sulphides not amenable to concentration and separation by conventional techniques.

Metallurgical laboratories conduct R&D in the properties and processing of metals to improve efficiency of Canadian metallurgical operations and to determine such properties as fracture and fatigue resistance of metals required in large projects such as pipelines and structures designed to operate in the Arctic and offshore regions.

Fuels research concentrates on non-renewable fuels, especially coal, oil sands and heavy oils. Extensive coal R&D facilities include a coal beneficiation pilot plant, pilot coke ovens and a complete pilot scale combustion laboratory investigating combustion efficiency of coals and wood and developing new methods of combustion such as fluidized beds for industrial and domestic use.

R&D on heavy oils and oil sands is directed toward increasing the yield of liquid fuels and ensuring that the products can be incorporated into the conventional oil supply and refining systems without major change in refining practices. Research is under way on combined processing with coal as a future source of liquid fuels. A pilot plant based on EMR's is under construction by Petro-Canada.

The sector operates pilot scale facilities and special research instruments that are beyond the normal requirements of individual companies for full-time use but are used in the sector's R&D and by companies under contract when required for their specific research. These include a rolling mill, experimental foundry, a mineral processing plant, special analytical equipment and the largest rock press in Canada.

**Canada centre for remote sensing**, a branch of the department, co-ordinates a remote sensing program in co-operation with federal and provincial departments, private industry and universities. The program develops and demonstrates systems, methods and instruments to deal with remote sensing data from satellites and aircraft, to develop an information system for Canada's land and ocean resource managers. It concentrates on satellite remote sensing, airborne remote sensing and an application program. Its analysis facilities are made available to scientists and users of remote sensing data and techniques. A fleet of aircraft carrying a number of state-of-the-art sensors, such as a synthetic aperture radar, is available to users across Canada on a limited charge recovery basis.

CCRS is the federal agency responsible for R&D in remote sensing by optical infra-red, ultra-violet and radar methods, both active and passive. After the branch acquires remotely sensed data from satellites such as Landsat and aircraft, it processes the data to provide information relating to mineral resources, agriculture, forestry, land use and Arctic navigation. CCRS also fosters Canadian industrial capability in ground receiving stations for satellite data reception and the development of remote sensing technology.

### 10.9.2 Earth Sciences

This sector assists the mineral industry through the Geological Survey of Canada, the earth physics branch, the surveys and mapping branch and the polar continental shelf project.

The **Geological Survey of Canada** maps and studies the geology of Canada. Principal aims are to ascertain mineral and energy resources potential and to assist in resource exploration by providing a systematic geological framework, by defining geological settings favourable to mineral and fuel occurrences, and by conducting magnetic, radiometric and geochemical surveys of interest to the mineral industry. The geological survey provides information on land resources, terrain performance and geological

hazards, derived from studies of earth and rock materials, land forms and associated dynamic processes. (See Chapter 1, 1.3 *Geology* and 1.3.3 *Origin of leading minerals*.) Part of the geological investigation deals with Canada's offshore regions, including non-renewable resources and coastal and seabed conditions.

The **earth physics branch** carries out geophysical work of interest to the mineral industry. To provide data to assess earthquake risk and hazard and to study the interior of the earth, the branch operates a network of seismological observatories. To study the structure of the earth's crust, it conducts gravity, seismic and electromagnetic surveys. Together with data from geomagnetic observatories, it provides reference fields and forecasts of geomagnetic disturbance for use in mineral exploration. Geothermal measurement boreholes provide information on underground thermal conditions, including permafrost.

The **surveys and mapping branch** has completed topographical mapping of Canada as described in Chapter 1, Physical setting. Through a basic network of survey control points across Canada, the branch provides precise figures of latitude, longitude and elevation above sea level. The branch also produces multicoloured maps for other government agencies, aeronautical charts and atlases. A national air photo library has on file over 4 million aerial photographs, both black and white and colour, taken over the last half century from aircraft and more recently from space satellites.

The **polar continental shelf project** co-ordinates and provides logistics support for all field work undertaken in the Canadian Arctic by government, and many non-government scientific researchers. It also conducts studies of scientific problems unique to the Arctic.

### 10.9.3 The energy sector

This is a policy recommending group. Responsibilities relate directly to the mining industry and many other parts of the economy. It assesses individual projects in relation to each energy source and the interrelationships of the several sources. It appraises trends in oil and gas exploration and production, transportation, processing and marketing in Canada and abroad, and informs federal agencies, industry and the public on oil and gas developments. In the uranium field, the sector co-ordinates resource assessment and development, establishment of enrichment facilities and export. It provides coal research and development grants, makes resource assessments and advises on production expansion rates. The sector administers federal interests in offshore mineral resources as well as federally owned mineral rights in the provinces. (See Chapter 11, Energy.)

**Summing up.** The department controls, under the Canada Explosives Act, the manufacture,

authorization, storage, sale, importation and transportation by road of explosives. It is responsible for research programs and policies for non-renewable resources. It conducts fundamental and applied resource engineering, economic research and field investigation into non-renewable resource problems on a total industry basis, in a regional, national and international context. Activities include the publication of reports; regional studies of the mineral

economy; assessment of mineral projects for which federal support has been requested; resource and reserve studies in a number of mineral commodities; and the safeguarding of Canadian mineral interests through participation in the work of international agencies. The mineral policy sector publishes extensively and maintains a listing of about 16,000 mineral showings and deposits that may be consulted by the public.

#### Sources

10.1 Information Systems Division, Resource Supply and Information Branch, Mineral Policy Sector, Energy, Mines and Resources Canada (EMR Canada).

10.2 Regional Mineral Development Division, Minerals and Metals Strategy Branch, Mineral Policy Sector, EMR Canada.

10.3 - 10.6 Minerals and Metals Strategy Branch, Mineral Policy Sector, EMR Canada.

10.7 Economic and Financial Policy Analysis Branch, EMR Canada.

10.8 - 10.9 Minerals, Earth Sciences and Technology Communications Branch, EMR Canada.

Co-ordinator, Lois Lemay.

#### Selected references

*Canada minerals yearbook*, 1980. A comprehensive report of developments in the mineral industry. Department of Energy, Mines and Resources, Ottawa, 1981. (Annual)

*Canada's mineral production: preliminary estimates*, 1982. Statistics Canada 26-202, Ottawa, 1983.

*Canadian mineral survey*, 1982. Energy Mines and Resources Canada, Ottawa, 1983.

*General review of the mineral industries: mines, quarries and oil wells, 1981*. Statistics Canada 26-201, Ottawa, 1983.

TABLES

... not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed

Certain tables may not add due to rounding

e estimate

p preliminary

r revised

million = 10<sup>6</sup>, billion = 10<sup>9</sup>, trillion = 10<sup>12</sup>

10.1 Value of mineral production

Year	Total value \$'000	Value per capita \$	Year	Total value \$'000	Value per capita \$	Year	Total value \$'000	Value per capita \$
1886	10,221	2.23	1925	226,583	24.38	1965	3,714,861	189.11
1890	16,763	3.51	1930	279,874	27.42	1970	5,722,059	268.68
1895	20,506	4.09	1935	312,344	28.84	1975	13,346,994	588.05
1900	64,421	12.15	1940	529,825	46.55	1978	20,261,053	837.33
1905	69,079	11.51	1945	498,755	41.31	1979	26,081,356	1,101.84
1910	106,824	15.29	1950 <sup>1</sup>	1,045,450	76.24	1980	31,841,758	1,331.49
1915	137,109	17.18	1955	1,795,311	114.37	1981	32,410,481	1,328.62
1920	227,860	26.63	1960	2,492,510	139.48	1982 <sup>P</sup>	33,081,908	1,344.62

<sup>1</sup>Value of Newfoundland production included from 1950.

10.2 Value of mineral production, by class, selected years, and by province, recent years  
(thousand dollars)

Year and province or territory	Metallics	Non- metallics	Fuels	Structural materials	Total
1970	3,073,344	480,538	1,717,731	450,446	5,722,059
1975	4,795,476 <sup>f</sup>	939,180	6,653,355	958,982	13,346,994 <sup>f</sup>
1978	5,697,571	1,477,877	11,577,557	1,508,048	20,261,053
1979	7,950,959	1,867,676	14,616,715	1,646,005	26,081,356
1980	9,696,956	2,532,361	17,943,864	1,668,577	31,841,758
1981	8,753,468	2,843,394	19,045,631	1,767,988	32,410,481
1982 <sup>P</sup>	7,035,214	2,311,518	22,162,103	1,573,073	33,081,908
1979					
Newfoundland (incl. Labrador)	1,054,271	44,175	—	26,074	1,124,520
Prince Edward Island	—	—	—	1,994	1,994
Nova Scotia	—	52,302	99,675	57,630	209,607
New Brunswick	419,123	11,624	10,369	38,511	479,627
Quebec	1,106,073	616,759	—	441,714	2,164,546
Ontario	2,544,643	105,778	29,679	584,433	3,264,533
Manitoba	510,049	8,466	48,403	85,812	652,730
Saskatchewan	265,907	770,399	786,925	50,541	1,873,772
Alberta	484	172,242	12,552,239	174,103	12,899,068
British Columbia	1,367,866	85,932	1,037,746	185,193	2,676,737
Yukon	299,244	—	—	—	299,244
Northwest Territories	383,299	—	51,679	—	434,978
1980					
Newfoundland (incl. Labrador)	968,539	51,139	—	15,975	1,035,653
Prince Edward Island	—	—	—	2,340	2,340
Nova Scotia	5,251	52,645	133,245	55,597	246,738
New Brunswick	302,674	11,916	16,951	40,981	372,522
Quebec	1,411,487	653,513	—	401,795	2,466,795
Ontario	3,877,984	119,126	37,037	606,306	4,640,453
Manitoba	664,808	11,087	54,977	71,703	802,575
Saskatchewan	270,270	1,063,411	929,348	51,587	2,314,616
Alberta	3,084	454,397	15,746,236	175,253	16,378,970
British Columbia	1,465,617	115,127	967,554	247,040	2,795,338
Yukon	359,903	—	1,354	—	361,257
Northwest Territories	367,339	—	57,162	—	424,501
1981					
Newfoundland (incl. Labrador)	955,427	57,187	—	17,649	1,030,263
Prince Edward Island	—	—	—	1,616	1,616
Nova Scotia	18,435	60,179	128,450	61,766	268,830
New Brunswick	452,580	16,945	21,671	39,769	530,965
Quebec	1,352,929	605,280	—	461,737	2,419,964
Ontario	3,265,219	175,992	45,524	673,092	4,159,827
Manitoba	478,636	16,334	64,251	82,880	642,101

### 10.2 Value of mineral production, by class, selected years, and by province, recent years (thousand dollars) (concluded)

Year and province or territory	Metallics	Non-metallics	Fuels	Structural materials	Total
Saskatchewan	295,477	1,040,704	909,817	46,574	2,292,572
Alberta	849	652,493	16,685,606	220,543	17,559,491
British Columbia	1,394,324	125,275	1,139,898	162,362	2,752,185
Yukon	235,575	—	—	—	235,575
Northwest Territories	304,017	93,005	50,414	—	447,436
1982 <sup>P</sup>					
Newfoundland (incl. Labrador)	593,713	15,637	—	16,563	625,913
Prince Edward Island	—	—	—	2,054	2,054
Nova Scotia	—	61,390	170,000	60,696	292,086
New Brunswick	432,639	20,274	24,571	39,270	516,744
Quebec	1,193,851	504,747	—	307,453	2,006,051
Ontario	2,307,710	178,799	51,959	634,598	3,173,065
Manitoba	345,818	13,605	85,920	66,011	511,355
Saskatchewan	283,519	685,727	1,182,397	39,347	2,190,990
Alberta	161	611,350	19,293,522	250,413	20,155,446
British Columbia	1,248,344	112,376	1,324,320	156,669	2,841,709
Yukon	167,862	—	—	—	167,862
Northwest Territories	461,607	107,613	29,414	—	598,634

### 10.3 Quantity indexes of production, principal mining industries (1971 = 100)

Mining industry	1971	1978 <sup>T</sup>	1979	1980	1981	1982
Metal mines	100.0	73.8	76.4	82.1	78.7	59.5
Placer gold and gold quartz	100.0	65.5	60.0	54.3	55.2	75.4
Iron	100.0	41.5	70.0	60.0	54.7	36.5
Other metal mines	100.0	86.5	82.8	93.5	90.2	67.7
Non-metal mines (except coal)	100.0	103.2	110.7	113.7	108.8	84.3
Asbestos	100.0	64.6	66.2	61.6	52.2	36.8
Mineral fuels	100.0	109.5	122.7	120.9	113.8	113.0
Coal	100.0	138.9	156.0	171.5	184.1	193.8
Crude oil and natural gas	100.0	107.3	120.2	117.1	108.5	106.9
Total, mines (incl. milling) quarries and oil wells	100.0	95.8	104.3	108.1	102.4	89.9

### 10.4 Quantity and value of mineral production

Mineral		1978 <sup>T</sup>	1979	1980	1981	1982 <sup>P</sup>
Quantity '000						
METALLICS						
Antimony	kg	..	..	..	..	..
Bismuth	"	145	137	149	168	126
Cadmium	"	1 151	1 209	1 033	834	739
Calcium	"	575	456	531	..	..
Cobalt	"	1 234	1 604	2 118	2 080	1 458
Columbium (Cb <sub>2</sub> O <sub>5</sub> )	"	2 473	2 513	2 463	2 741	3 126
Copper	"	659 380	636 383	716 363	691 328	606 202
Gold	g	53 967	51 142	50 620	52 034	62 456
Indium	"	3 857	..	..	..	..
Iron ore	t	42 931	59 617	49 068	49 551	34 496
Iron, remelt	"	..	..	..	..	..
Lead	kg	319 809	310 745	251 627	268 556	290 292
Magnesium	"	8 309	9 015	9 252	..	..
Mercury	"	..	..	..	..	..
Molybdenum	"	13 943	11 175	11 889	12 850	15 232
Nickel	"	128 310	126 482	184 802	160 247	88 745
Platinum group	g	10 768	6 157	12 776	11 902	8 590
Selenium	kg	122	218	279	255	198
Silver	"	1 267	1 147	1 070	1 129	1 204
Tantalum (Ta <sub>2</sub> O <sub>5</sub> )	"	..	159	115	104	60
Tellurium	"	31	42	15	31	19
Tin	"	360	337	243	239	153
Tungsten (WO <sub>3</sub> )	"	2 886	3 254	4 007	2 515	3 053
Uranium (U <sub>3</sub> O <sub>8</sub> )	"	8 211	6 530	6 739	7 507	8 189
Yttrium (Y <sub>2</sub> O <sub>3</sub> )	"	..	..	..	..	..
Zinc	"	1 066 908	1 099 926	883 697	911 178	1 032 653

## 10.4 Quantity and value of mineral production (continued)

Mineral	1978 <sup>f</sup>	1979	1980	1981	1982 <sup>p</sup>
Quantity '000					
NON-METALLICS					
Asbestos	t 1 422	1 493	1 323	1 122	822
Barite	" "	"	"	"	"
Diatomite	" "	"	"	"	"
Feldspar	" "	"	"	"	"
Fluorspar	" "	"	"	"	"
Gemstones	kg "	"	"	"	"
Gypsum	t 8 074	8 098	7 336	7 025	5 726
Helium	m <sup>3</sup> —	—	—	—	—
Magnesian dolomite and brucite	t "	"	"	"	"
Nepheline syenite	" 599	606	600	588	518
Nitrogen	m <sup>3</sup> "	"	"	"	"
Peat	t 435	480	466	462	447
Potash (K <sub>2</sub> O)	" 6 344	7 074	7 201	6 549	5 196
Pyrite, pyrrhotite	" 9	31	32	10	20
Quartz	" 2 165	2 368	2 252	2 238	1 610
Salt	" 6 452	6 881	7 423	7 240	8 076
Soapstone, talc, pyrophyllite	" 62	90	92	83	72
Sodium sulphate	" 377	443	481	535	549
Sulphur, in smelter gas	" 676	667	895	783	579
Sulphur, elemental	" 5 752	6 314	7 656	8 018	7 108
Titanium dioxide	" "	"	"	"	"
FUELS					
Coal	t 30 478	33 200	36 688	40 088	43 200
Natural gas	m <sup>3</sup> 88 609	94 426	87 108	73 824	73 783
Natural gas by products	" 16 313	19 664	19 147	18 883	17 965
Petroleum, crude	" 76 348	86 910	83 477	74 553	71 095
STRUCTURAL MATERIALS					
Clay products	—	—	—	—	—
Cement	t 10 558	11 765	10 274	10 145	8 418
Lime	" 2 034	1 859	2 554	2 555	2 191
Sand and gravel	" 272 092	285 221	276 452	259 661	207 227
Stone	" 122 144	109 719	103 366	85 091	61 929
Value \$'000					
METALLICS					
Antimony	8,151	8,350	7,059	3,121	4,172
Bismuth	1,160	974	1,015	1,121	762
Cadmium	7,094	8,621	7,568	4,121	2,235
Calcium	2,689	2,152	3,422	—	—
Cobalt	37,750	109,344	134,748	108,383	45,379
Columbium (Cb <sub>2</sub> O <sub>5</sub> )	14,220	15,292	15,302	18,612	20,944
Copper	1,084,245	1,511,200	1,859,637	1,529,770	1,179,757
Gold	382,423	590,766	1,165,417	922,089	929,378
Indium	3,857	"	"	"	"
Iron ore	1,221,599	1,807,399	1,700,915	1,748,112	1,211,657
Iron, remelt	85,968	61,067	118,990	113,125	105,872
Lead	259,624	410,518	273,766	263,588	210,203
Magnesium	19,825	24,444	27,822	"	"
Mercury	—	—	—	—	—
Molybdenum	179,069	332,024	299,323	288,473	327,077
Nickel	635,451	828,617	1,497,418	1,238,148	581,074
Platinum group	65,293	56,334	159,088	136,186	98,889
Selenium	4,917	6,908	8,779	8,665	3,752
Silver	251,361	478,400	828,805	458,134	378,761
Tantalum (Ta <sub>2</sub> O <sub>5</sub> )	"	14,521	21,810	23,165	7,947
Tellurium	1,380	2,192	754	1,089	723
Tin	5,099	5,565	5,090	3,767	2,750
Tungsten (WO <sub>3</sub> )	"	"	"	"	"
Uranium (U <sub>3</sub> O <sub>8</sub> )	617,528	616,168	702,038	794,212	815,185
Yttrium (Y <sub>2</sub> O <sub>3</sub> )	"	"	"	"	"
Zinc	817,525	1,060,103	858,190	1,089,587	1,108,687
NON-METALLICS					
Asbestos	532,403	607,461	618,493	548,406	402,995
Barite	2,657	1,953	4,380	5,124	2,359
Diatomite	"	"	"	"	"
Feldspar	"	"	"	"	"
Fluorspar	"	"	"	"	"
Gemstones	1,505	1,392	1,632	194	186
Gypsum	38,625	41,126	39,539	46,855	42,577
Helium	—	—	—	—	—
Magnesian dolomite and brucite	5,990	8,990	10,404	11,472	13,556
Nepheline syenite	14,182	15,180	15,936	16,770	17,338
Nitrogen	"	"	"	"	"
Peat	35,162	41,150	44,555	51,574	54,399
Potash (K <sub>2</sub> O)	504,535	735,246	1,020,705	990,418	625,658
Pyrite, pyrrhotite	72	275	345	110	220
Quartz	21,747	26,579	29,184	34,693	32,880
Salt	98,326	109,848	122,775	131,565	161,452
Soapstone, talc, pyrophyllite	2,177	3,439	3,877	4,462	5,456

### 10.4 Quantity and value of mineral production (concluded)

Mineral	1978 <sup>r</sup>	1979	1980	1981	1982 <sup>p</sup>
	Value \$'000				
Sodium sulphate	19,300	25,211	30,468	39,404	47,593
Sulphur, in smelter gas	11,649	14,515	28,913	47,392	41,027
Sulphur, elemental	101,392	159,642	444,095	647,652	600,302
Titanium dioxide	88,156	75,670	117,060	131,669	106,006
<b>FUELS</b>					
Coal	779,426	860,000	932,000	1,072,500	1,297,800
Natural gas	3,923,465	4,855,845	6,148,826	6,420,631	7,081,678
Natural gas by products	1,063,670	1,449,015	1,825,148	2,098,376	2,154,702
Petroleum, crude	5,810,996	7,451,855	9,037,890	9,454,124	11,627,923
<b>STRUCTURAL MATERIALS</b>					
Clay products	109,635	121,526	108,453	119,116	94,656
Cement	572,590	653,877	581,372	665,936	610,387
Lime	76,218	82,774	129,232	153,874	148,861
Sand and gravel	416,860	457,120	508,364	517,002	464,221
Stone	332,744	330,708	341,156	312,060	254,948
<b>Total</b>	<b>20,261,053</b>	<b>26,081,356</b>	<b>31,841,758</b>	<b>32,410,481</b>	<b>33,081,908</b>

### 10.5 Percentage of the total value contributed by principal minerals

Mineral	1971	1978	1979	1980	1981	1982 <sup>p</sup>
<b>METALLICS<sup>1</sup></b>						
Copper	12.7	5.4	5.8	5.8	4.7	3.6
Gold	1.3	1.9	2.3	3.7	2.8	2.8
Iron ore	9.3	5.7	6.9	5.3	5.4	3.7
Lead	1.8	1.3	1.6	0.9	0.8	0.6
Molybdenum	0.6	0.9	1.3	0.9	0.9	1.0
Nickel	13.4	3.1	3.2	4.7	3.8	1.8
Platinum group	0.7	0.3	0.2	0.5	0.4	0.3
Silver	1.2	1.2	1.8	2.6	1.4	1.1
Uranium	—	3.0	2.4	2.2	2.5	2.5
Zinc	7.0	4.0	4.1	2.7	3.4	3.4
<b>NON-METALLICS<sup>1</sup></b>						
Asbestos	3.4	2.6	2.3	1.9	1.7	1.2
Gypsum	0.3	0.2	0.2	0.1	0.1	0.1
Nepheline syenite	0.1	0.1	0.1	0.1	0.1	0.1
Potash	2.3	2.5	2.8	3.2	3.1	1.9
Quartz	0.1	0.1	0.1	0.1	0.1	0.1
Salt	0.7	0.5	0.4	0.4	0.4	0.5
Sodium sulphate	0.1	0.1	0.1	0.1	0.1	0.1
Sulphur, in smelter gas	0.1	0.1	0.1	0.1	0.1	0.1
Sulphur, elemental	0.4	0.5	0.6	1.4	2.0	1.8
Titanium dioxide	0.7	0.4	0.3	0.4	0.4	0.3
<b>FUELS<sup>1</sup></b>						
Coal	1.0	3.8	3.3	2.9	3.3	3.9
Natural gas	5.7	19.4	18.6	19.3	19.8	21.4
Petroleum, crude	22.8	28.7	28.6	28.4	29.2	35.1
<b>STRUCTURAL MATERIALS</b>						
Clay products	0.8	0.5	0.5	0.3	0.4	0.3
Cement	0.3	2.8	2.5	1.8	2.1	1.8
Lime	0.4	0.4	0.3	0.4	0.5	0.4
Sand and gravel	2.6	2.1	1.8	1.6	1.6	1.4
Stone	1.6	1.6	1.3	1.1	1.0	0.8

<sup>1</sup>Includes minor items not specified.

### 10.6 Producers' shipments of copper (tonnes), by province, and total value

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>p</sup>
Newfoundland	12 682	11 533	8 223	4 879	5 154	2 474
Nova Scotia	15	—	—	—	—	—
New Brunswick	9 313	10 341	10 647	9 092	12 034	12 851

10.6 Producers' shipments of copper (tonnes), by province, and total value (concluded)

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Quebec	167 669	90 173	80 231	97 728	89 908	90 572
Ontario	274 306	197 039	192 946	259 349	225 837	172 873
Manitoba	50 135	60 239	58 303	64 751	55 983	47 972
Saskatchewan	10 111	6 027	5 695	5 194	4 956	4 460
British Columbia	127 287	273 694	272 163	264 675	288 085	267 513
Yukon	2 328	10 019	7 778	10 433	9 094	7 236
Northwest Territories	625	316	397	262	277	251
Total	654 471	659 380	636 383	716 363	691 328	606 202
Value \$'000	760,016	1,084,245	1,511,200	1,859,637	1,529,770	1,179,767

10.7 Producers' shipments of nickel (tonnes), by province, and total value

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Quebec	679	—	—	—	—	—
Ontario	195 729	93 671	88 445	145 608	130 268	63 065
Manitoba	69 461	34 639	38 037	39 194	29 979	25 680
Saskatchewan	—	—	—	—	—	—
British Columbia	1 154	—	—	—	—	—
Yukon	—	—	—	—	—	—
Total	267 023	128 310	126 482	184 802	160 247	88 745
Value \$'000	800,064	635,451	828,617	1,497,418	1,238,148	581,074

10.8 Iron ore shipments and production of pig iron and steel ingots and castings

Year	Iron ore shipments					Production of pig iron '000 t	Production of steel ingots and castings '000 t
	Newfoundland (incl. Labrador) '000 t	Quebec '000 t	Ontario '000 t	British Columbia '000 t	Total		
					Quantity '000 t	Value \$'000	
1971	19 846	11 219	10 141	1 751	42 957	55,136	11 047
1978	18 782	13 933	9 600	616	42 931	1,221,599	14 898
1979	30 220	20 854	7 875	668	59 617	1,807,399	16 078
1980	24 620	17 449	6 345	654	49 068	1,700,915	15 901
1981	25 686	17 842	5 421	602	49 551	1,748,112	14 811
1982 <sup>P</sup>	17 853	12 122	3 748	722	34 496	1,211,657	11 871

10.9 Producers' shipments of lead (tonnes) from Canadian ores, by province, and total value

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	12 230	8 887	7 013	4 347	2 749	1 151
Nova Scotia	376	—	—	2 567	11 716	—
New Brunswick	59 334	72 694	72 850	42 551	68 373	81 840
Quebec	587	249	190	88	2	—
Ontario	8 088	7 060	6 969	7 680	3 387	6 251
Manitoba	182	532	375	576	480	783
British Columbia	112 458	81 065	84 452	76 710	80 357	83 119
Yukon	98 582	79 234	78 250	65 771	55 970	35 838
Northwest Territories	76 035	70 089	60 646	51 337	45 522	81 310
Total	367 872	319 809	310 745	251 627	268 556	290 292
Value \$'000	109,488	259,624	410,518	273,766	263,588	210,203

**10.10 Producers' shipments of zinc (tonnes), by province, and total value**

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	18 899	47 715	52 446	44 073	39 971	26 239
Nova Scotia	—	—	—	2 470	5 475	—
New Brunswick	146 523	204 226	213 841	135 583	228 608	247 360
Quebec	158 230	95 517	78 928	65 599	53 200	65 407
Ontario	331 780	275 907	289 357	251 537	246 027	256 483
Manitoba	22 667	57 071	45 549	43 055	39 540	32 288
Saskatchewan	7 844	5 938	4 490	5 276	6 732	4 325
British Columbia	138 551	96 045	88 419	67 481	79 215	63 955
Yukon	105 748	96 673	113 573	90 938	78 806	58 961
Northwest Territories	203 497	187 810	213 323	117 685	133 604	277 635
Total	1 133 739	1 066 902	1 099 926	883 697	911 178	1 032 653
Value \$'000	418,161	817,525	1,060,103	858,190	1,089,587	1,108,687

**10.11 Producers' shipments of gold (kilograms), by province, and total value**

Province or territory and value	1971	1978	1979	1980 <sup>1</sup>	1981	1982 <sup>P</sup>
Newfoundland	228	549	396	234	209	78
Nova Scotia	—	—	—	—	—	—
New Brunswick	132	340	251	129	196	201
Quebec	20 119	15 130	14 721	15 548	17 311	23 214
Ontario	35 271	21 797	19 173	18 384	18 241	19 802
Manitoba	935	1 473	1 361	1 521	1 304	1 612
Saskatchewan	807	403	375	360	305	273
Alberta	2	35	42	133	48	11
British Columbia	2 781	6 579	8 277	7 477	7 680	7 458
Yukon	450	1 202	1 190	2 555	1 915	2 858
Northwest Territories	9 590	6 459	5 356	4 209	4 825	6 949
Total	70 317	53 967	51 142	50 620	52 034	62 456
Value \$'000	79,903	382,423	590,766	1,165,417	922,089	929,378

<sup>1</sup>Does not include placer production.**10.12 Producers' shipments of silver (kilograms), by province, and total value**

Province or territory and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	17 530	16 000	14 000	9 000	7 000	1 000
Nova Scotia	1 720	—	—	—	1 000	—
New Brunswick	157 310	200 000	187 000	117 000	193 000	243 000
Quebec	136 171	78 000	73 000	59 000	58 000	54 000
Ontario	581 064	443 000	412 000	444 000	324 000	345 000
Manitoba	21 595	29 000	26 000	31 000	26 000	25 000
Saskatchewan	7 426	8 000	8 000	6 000	5 000	4 000
British Columbia	238 694	229 000	214 000	204 000	402 000	458 000
Yukon	178 774	144 000	130 000	147 000	80 000	70 000
Northwest Territories	91 209	120 000	83 000	53 000	33 000	4 000
Total	1 431 493	1 267 000	1 147 000	1 070 000	1 129 000	1 204 000
Average price per kilogram (Canadian funds) \$	50.16	198.39	417.09	774.58	405.79	314.59
Value \$'000	71,797	251,361	478,400	828,805	458,134	378,761

**10.13 Quantity and value of producers' shipments of uranium (U<sub>3</sub>O<sub>8</sub>), by province**

Year	Ontario		Saskatchewan		Total	
	Quantity t	Value \$'000	Quantity t	Value \$'000	Quantity t	Value \$'000
1971	3 180	..	546	..	3 726	..
1974	3 830	..	520 <sup>f</sup>	..	4 350 <sup>f</sup>	..
1975	4 794	..	723	..	5 517	..
1976	4 441	186,439	1 972	55,390	6 413	241,829
1977	4 278	250,689	2 546	98,530	6 824	349,219
1978 <sup>f</sup>	4 455	363,845	3 756	253,683	8 211	617,528
1979	4 005	375,793	2 525	240,375	6 530	616,168
1980	4 394	463,454	2 345	238,584	6 739	702,038
1981	4 859	525,806	2 648	268,406	7 507	794,212
1982 <sup>p</sup>	4 955	550,586	3 234	264,599	8 189	815,185

**10.14 Quantity and value of producers' shipments of asbestos**

Year	Quantity '000 t	Value \$'000
1971	1 483	203,999
1978	1 422	532,403
1979	1 493	607,461
1980	1 323	618,493
1981	1 122	548,406
1982 <sup>p</sup>	822	402,995

**10.15 Producers' shipments of potash**

Year	K <sub>2</sub> O eq. '000 t	Value \$'000
1971	3 629	134,955
1978	6 344	504,535
1979	7 074	735,246
1980	7 201	1,020,705
1981	6 549	990,418
1982 <sup>p</sup>	5 196	625,658

**10.16 Producers' shipments of salt (thousand tonnes), by province, and total value**

Province and value	1971	1978	1979	1980	1981	1982 <sup>p</sup>
Nova Scotia	806	923	999	1 018	1 029	1 142
Ontario	3 785	4 865	5 189	5 208	4 968	5 479
Manitoba	24	8	—	—	—	—
Saskatchewan	190	297	292	332	388	402
Alberta	222	358	402	865	855	903
Quebec	...	...	...	...	...	150
Total	5 027	6 452	6 881	7 423	7 240	8 076
Value \$'000	40,111	98,326	109,848	122,775	131,565	161,452

**10.17 Quantity and value of sulphur produced and sold**

Quantity and value	1971	1978	1979	1980	1981	1982 <sup>p</sup>
Sulphur in smelter gases						
'000 t <sup>1</sup>	561	676	667	895	783	579
\$'000	4,632	11,649	14,515	28,913	47,392	41,027

### 10.17 Quantity and value of sulphur produced and sold (concluded)

Quantity and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Producers' shipments of pyrite and pyrrhotite						
Gross weight <sup>2</sup> '000 t	288	9	31	32	10	20
Sulphur content '000 t	141	5	14	14	5	9
\$'000	1,162	..	..	..	..	..
Sales of elemental sulphur <sup>3</sup>						
'000 t	2 857	5 752	6 314	7 656	8 018	7 108
\$'000	21,300	101,392	159,642	444,095	647,652	600,302

<sup>1</sup>Includes sulphur in acid made from roasting zinc sulphide concentrates at Arvida and Port Maitland.

<sup>2</sup>Excludes pyrite and pyrrhotite used to produce iron residues or sinter.

<sup>3</sup>Recovered from sour natural gas and nickel sulphide ores.

### 10.18 Producers' shipments of gypsum (thousand tonnes), by province, and total value

Province	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	509	809	847	635	512	416
Nova Scotia	4 436	5 549	5 613	4 988	4 993	4 290
New Brunswick	70	50	59	45	20	10
Ontario	634	741	723	740	613	506
Manitoba	118	183	135	144	202	88
British Columbia	313	743	721	784	685	415
Total	6 080	8 074	8 098	7 336	7 025	5 726
Value \$'000	15,083	38,625	41,126	39,539	46,855	42,577

### 10.19 Production and exports of nepheline syenite

Year	Production		Exports	
	Quantity '000 t	Value \$'000	Quantity '000 t	Value \$'000
1971	469	6,206	372	5,333
1978	599	14,182	421	10,731
1979	606	15,180	471	12,887
1980	600	15,936	448	13,857
1981	588	16,770	476	15,258
1982 <sup>P</sup>	518	17,338	415	15,765

### 10.20 Producers' shipments and value, imports, exports and apparent consumption of cement

Year	Shipments (sold or used)		Imports '000 t	Exports <sup>1</sup> '000 t	Apparent consumption <sup>2</sup> '000 t
	Quantity '000 t	Value \$'000			
1971	8 234	183,374	51	806	7 479
1978	10 558	572,590	220	1 635	9 144
1979	11 765	653,877	194	2 289	9 671
1980	10 274	581,372	223	1 527	8 969
1981	10 145	665,936	680	1 579	9 246
1982 <sup>P</sup>	8 418	610,387	232	1 752	6 897

<sup>1</sup>Standard portland cement.

<sup>2</sup>Shipments plus imports less exports.

**10.21 Producers' shipments of sand and gravel (thousand tonnes), by province, and total value**

Province and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	5 048	4 784	8 962	3 279	2 818	2 775
Prince Edward Island	1 410	981	774	889	330	400
Nova Scotia	5 447	8 917	9 441	9 578	9 548	9 550
New Brunswick	4 522	7 016	5 256	6 492	6 282	6 100
Quebec	37 743	78 913	79 576	64 806	74 729	34 209
Ontario	70 426	89 216	91 385	102 174	77 502	75 000
Manitoba	15 145	13 180	12 193	9 794	11 716	12 800
Saskatchewan	10 270	11 934	10 232	9 828	7 909	8 200
Alberta	16 945	20 898	25 727	24 334	26 465	29 000
British Columbia	26 538	36 253	41 675	45 278	42 362	29 193
<b>Total</b>	<b>193 494</b>	<b>272 092</b>	<b>285 221</b>	<b>276 452</b>	<b>259 661</b>	<b>207 227</b>
<b>Value</b> \$'000	<b>152,628</b>	<b>416,860</b>	<b>457,120</b>	<b>508,364</b>	<b>517,002</b>	<b>464,221</b>

**10.22 Producers' shipments of stone<sup>1</sup> (thousand tonnes), by province, and total value**

Province and value	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	185	655	1 262	948	519	490
Nova Scotia	1 491	1 980	2 181	1 809	825	800
New Brunswick	1 298	3 121	3 122	3 054	2 688	2 500
Quebec	34 033	76 219	63 251	54 657	44 961	23 301
Ontario	25 618	33 816	33 439	31 529	30 707	30 200
Manitoba	918	2 678	1 924	2 088	1 845	1 800
Alberta	167	241	186	193	271	325
British Columbia	2 982	3 434	4 354	9 088	3 275	2 513
<b>Total</b>	<b>66 692</b>	<b>122 144</b>	<b>109 719</b>	<b>103 366</b>	<b>85 091</b>	<b>61 929</b>
<b>Value</b> \$'000	<b>96,537</b>	<b>332,744</b>	<b>330,708</b>	<b>341,156</b>	<b>312,060</b>	<b>254,948</b>

<sup>1</sup>Excludes limestone used in Canadian lime and cement industries.

**10.23 Value (total sales) of producers' shipments of clay products from domestic clays, by province (thousand dollars)**

Province	1971	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	80	592	659	806	921	821
Nova Scotia	1,844	4,700	9,429	5,487	2,926	4,500
New Brunswick	627	2,300	2,356	2,448	1,415	2,200
Quebec	6,565	17,220	18,503	13,578	16,797	13,720
Ontario	30,538	59,667	63,144	58,000	67,765	50,946
Manitoba	469	2,000	3,504	1,364	2,020	1,776
Saskatchewan	1,140	3,146	3,148	3,183	3,964	3,477
Alberta	4,031	11,200	12,556	13,200	15,308	12,251
British Columbia	4,900	8,810	8,227	10,387	8,000	4,965
<b>Total</b>	<b>50,194</b>	<b>109,635</b>	<b>121,526</b>	<b>108,453</b>	<b>119,116</b>	<b>94,656</b>

**Source**

10.1 – 10.23 Mineral Policy Sector, Department of Energy, Mines and Resources.



# CHAPTER 11

---

# ENERGY



## HIGHLIGHTS

---

Canada develops, but also uses, substantial energy resources. The generally cold winter climate, vast transportation distances, rising urban demands and increased needs for modern farming are factors contributing to growing energy requirements.

Energy needs in 1983 were met primarily by oil (44.8%), natural gas (26.0%), coal (14.8%) and hydro and nuclear power (14.4%).

Federal expenditures for renewable energy programs in 1982-83 were estimated at \$28.5 million and in 1983-84 at \$34 million. These funds were available for research, development and demonstration projects involving renewables other than large-scale hydroelectric power.

There were no significant oil discoveries in Western Canada in 1983. Manitoba, Saskatchewan and Alberta recorded a higher level of oil-directed activity than in the previous three years.

The reserves life index for crude oil and equivalent at the end of 1982 was 16.0 years, for liquefied petroleum gases, 8.4 years and for natural gas, 41.7 years.

<b>11.1</b>	<b>International scene</b>	<b>363</b>
<b>11.2</b>	<b>Energy developments</b>	<b>363</b>
11.2.1	Pricing and fiscal incentives	364
11.2.2	Oil substitution	364
11.2.3	Conservation	365
11.2.4	Legislation	365
11.2.5	Renewable energy sources	365
<b>11.3</b>	<b>Energy supply and demand</b>	<b>367</b>
<b>11.4</b>	<b>Oil and natural gas</b>	<b>367</b>
11.4.1	Production and consumption	367
11.4.2	Exploration and development	367
11.4.3	Reserves	368
<b>11.5</b>	<b>Oil refining</b>	<b>368</b>
<b>11.6</b>	<b>Transportation</b>	<b>368</b>
11.6.1	Natural gas	368
11.6.2	Oil pipelines	370
<b>11.7</b>	<b>Coal</b>	<b>370</b>
11.7.1	Production areas	371
<b>11.8</b>	<b>Uranium</b>	<b>372</b>
<b>11.9</b>	<b>Electric power</b>	<b>373</b>
11.9.1	Development	373
11.9.2	Sources	373
11.9.3	Federal policy	373
11.9.4	Provincial policy	373
11.9.5	Regional activities	374

## TABLES

11.1	Primary energy balance	375
11.2	Trade in energy, 1979-82	376
11.3	Oil imports by country	377
11.4	Crude production and value	377
11.5	Petroleum supply and demand	378
11.6, 11.7	Natural gas — production and value, supply and demand	378
11.8, 11.9	Natural gas liquids — production and value, supply and demand	379
11.10, 11.11	Coal — production and value, supply and demand	380
11.12, 11.13	Electricity — generated and consumed, supply and demand	381
11.14	Fuels used for thermal electricity	381
11.15	Electric energy generated	382
11.16	Oil and gas wells drilled	383
11.17	Gas and oil pipelines	383
11.18	Oil refining	384
11.19	Installed generating capacity	385
11.20, 11.21	Expenditures in energy-related industries	386

## CHARTS

Chart 11.1	Exports to the United States	366
Chart 11.2	Federal spending on energy R&D	369

## CHAPTER 11

# ENERGY

### 11.1 International scene

As a consequence of reduced global oil demand resulting from conservation and substitution measures, the price of oil declined after a decade of constant increases. In early 1983, the Organization of Petroleum Exporting Countries (OPEC) made a commitment to reduce their official benchmark price for oil to US\$29 per barrel from US\$34. In addition, OPEC members agreed to cut their overall production ceiling by one million barrels a day (159 000 m<sup>3</sup>) to 17.5 million (2 781 000 m<sup>3</sup>) for the remainder of 1983.

The International Energy Agency (IEA), of which Canada is one of 21 member nations, is an autonomous agency of the Organization for Economic Co-operation and Development. Its main purpose is to organize its members to deal with any oil crisis which would be considered as a major economic threat. Therefore, intermittently, it runs oil sharing system tests. The fourth test was carried out from April to June 1983.

Canada is also an active participant in such bodies as the Organization for Economic Co-operation and Development (OECD), the North Atlantic Treaty Organization (NATO), the United Nations (UN) and the World Energy Conference (WEC). The WEC, a London-based organization established in 1924, is dedicated to the goal of promoting the development and peaceful use of energy resources. The sixth Canadian National Energy Forum sponsored by the Canadian National Committee of the WEC was held in Ottawa in November 1981. A total of 20 speakers from various sectors of the Canadian economy addressed various aspects of the role of energy in Canada's industrial development. The Twelfth Congress of the World Energy Conference was held in New Delhi in September 1983 on the theme "Energy-Development — Quality of Life".

Canada has held bilateral energy discussions with a number of countries including Egypt, with which it signed a nuclear co-operation agreement in 1982.

The Petro-Canada International Assistance Corp. was established in 1980 to assist developing countries in reducing their dependence on imported oil. The corporation has since entered into oil and gas assistance projects with the Philippines, Jamaica, Senegal, Barbados, Tanzania and Gambia. In

mid-1983, a Caribbean basin regional seismic program and an exploration assistance program for Thailand were in preparation.

A list of countries from which Canada imports oil, by volume and by value, appears in Table 11.3.

### 11.2 Energy developments

Energy policy implementation has continued as a flexible process in response to changing domestic and international circumstances. The National Energy Policy (NEP) announced in 1980 proposed a variety of means to achieve its stated objectives of supply security, opportunity for Canadians to participate in energy development, and fairness in pricing and revenue sharing among governments and industry. Those measures included conservation of scarce resources, substitution of more abundant sources for those whose supply was diminishing, a search for new supplies, the promotion of greater Canadian participation, and efforts to distribute revenues in such a way as to prevent excessive regional imbalances.

During 1981-83 the federal government, in consultation with provincial governments and industry, made significant revisions in the NEP to accommodate to changes in the energy environment. These changes, particularly in energy pricing and incentives, were announced in agreements with Alberta, Saskatchewan and British Columbia in the latter part of 1981, and with Nova Scotia in early 1982, through a policy update statement in May 1982, through further agreements with the western provinces in mid-1983, and by special measures with individual sections of the energy industries. The revisions affected all major aspects of the original policy including price levels and pricing mechanisms, revenue shares, taxation measurement and application, allocation of responsibility between the levels of government, and utilization of revenues. The initiatives undertaken were directed toward national and regional needs and objectives.

These new measures were designed to: assist in coping with the problems created by faster than expected reductions in oil use, including shut-in domestic oil; promote the accelerated penetration of natural gas into domestic markets in place of oil,

including the probable supply of Sable Island gas to the Atlantic region; strengthen the petroleum industry's cash flow for exploration at a time when industry's financial position has been weakened; and freeze the natural gas and gas liquids tax until the end of 1982 to make it an economically attractive oil substitute and dispense with a scheduled increase in the petroleum compensation charge.

Since 1960 the average annual increase in Canadian crude oil demand was at least 5% prior to the Middle East oil crisis of 1973-74 and the initiation of rapid oil price increases. In the second half of the 1970s there was an average annual increase of 3.4%. In the period 1979-82 a number of factors, including sharply higher prices and the impact of NEP initiatives, led to an average 9.1% decline in crude oil usage. In contrast to an increase of 5.6% in 1979, total energy use final demand declined by 0.6% in 1980, 2.9% in 1981 and 4.6% in 1982. This took place against a background of increases in the gross national product (GNP) of 0.9% in 1980 and 2.9% in 1981 and a decrease of 5.0% in 1982.

### 11.2.1 Pricing and fiscal incentives

The agreement between the governments of Canada and Alberta relating to energy pricing and taxation, as modified in mid-1983, froze the price of old oil (that discovered before March 31, 1974) at \$29.75 per barrel. This price was designed to remain constant until early 1985, unless a significant change in world oil prices was experienced. This 1983 accord also: guaranteed that natural gas prices will not rise above 65% of the price of oil; redefined oil discovered between 1974 and 1980 to allow it to qualify for the world price; and permitted the provision of world price for output from infill wells drilled to enhance production from existing oil fields. Amendments to the Canada-Saskatchewan agreement of October 1981 relating to energy pricing and taxation were announced in August 1983.

The NEP update of May 1982 introduced cash-flow relief measures to firms involved in exploration. This relief took several forms including broadening of the scope of new oil reference price to cover high-cost oil production, and a special price for oil discovered after 1973 and before 1981 to encourage firms which explored aggressively for oil after the 1973 international oil crisis.

The NEP update contained pricing and taxation adjustments estimated to increase petroleum industry cash flow by approximately \$2 billion. These included: a drop in the rate of PGRT from 16% to 14.67% from June 1, 1981 to May 31, 1983 (after an existing resource tax allowance was calculated in, producers were paying the PGRT at a rate of 11%); a reduction in the rate of PGRT paid by integrated oil sands plants from 12% to 8% between January 1, 1983 and December 31, 1984; the incremental oil revenue tax was reduced to nil between June 1, 1982

and May 31, 1983 and an annual credit of up to \$250,000 for small producers to offset their PGRT liability on their production income after May 31, 1982. Another adjustment took the form of the provision of earned depletion for tertiary recovery projects, subject to agreement with producing provinces on appropriate levels of royalty relief, and a provision of data indicating the justification for such support.

The April 19, 1983 federal budget introduced a change in the PGRT for enhanced oil recovery projects. This modification would result in no PGRT being payable by participants on the production revenue of an enhanced oil project until all eligible capital investments have been recovered by investors.

By June 1983, a federal petroleum incentives program (PIP) had contributed slightly more than \$2 billion to eligible exploration and development expenses since it began to replace the previous tax-based incentives system in January 1981. It was designed to open up new investment opportunities in petroleum exploration and development, enabling more Canadian investors to share in expansion benefits, and achieving at least 50% Canadian ownership and increased Canadian control of oil and gas production by 1990. The vast majority of PIP contributions were for exploration expenses incurred on the Canada Lands, that is, lands both in the territories and offshore. Contributions for exploration and development in Alberta, where the bulk of western Canadian petroleum activity occurs, are funded from the Alberta petroleum incentives program. Under terms of the Canada-Alberta energy pricing agreement of September 1981, Alberta administers and pays the incentives to industry under a program for activities in the province.

**Nuclear energy.** To stimulate better understanding of the potential of nuclear energy, and to provide a basis for study of issues related to the supply and use of nuclear energy, the *Nuclear industry review* was released in August 1982. It suggests that long-term prospects for the nuclear industry are favourable and that Canada will need an industry capable of building new reactors in the 1990s.

### 11.2.2 Oil substitution

A Canada oil substitution program (COSP), launched nationally in May 1981 was designed to reduce oil consumption to 10% of total energy used in residential, commercial and industrial sectors by 1990. Grants cover up to 50% of eligible costs of converting heating systems from oil to natural gas, electricity, propane and renewable sources such as wood and solar energy, to a maximum of \$800 (up to \$5,500 for multiple units). The cumulative value of COSP grants issued for the fiscal years 1981-82 and 1982-83 was \$283.3 million for 417,258 COSP grants. During 1981-82 \$132.0 million was spent for 191,916 grants: 83,312 for gas conversions, 71,865

for electrical conversions, 33,583 for wood, 2,310 for propane and 846 for other types of conversions. In October 1983 agreement was reached on the terms of a jointly-funded \$125,000 feasibility study on the use of propane and natural gas as oil substitutes in Northwest Territories.

In February 1983 the federal government announced two natural gas contribution programs, components of a federal program to encourage the use of alternative fuels for vehicles. The natural gas fueling station contribution program provided a taxable contribution of up to \$50,000 to be extended to 125 fueling station operators who would sell natural gas to the public. The natural gas vehicle program was designed to encourage the use of natural gas in vehicles by contributing \$500 toward the estimated \$1,800 cost of converting a vehicle for natural gas use.

#### 11.2.3 Conservation

In October 1982 a remote communities demonstration program (RCDP) was announced. It would contribute to the cost of technical studies and projects to demonstrate methods of reducing oil dependence in remote communities not served by an electrical grid or natural gas pipeline. It was estimated that 268 communities and 137,000 citizens could benefit from the program.

**CHIP.** A Canadian home insulation program (CHIP) has assisted almost 2 million households to make their homes more energy efficient. CHIP grants totalled more than \$570 million by May 1983, based on grants of up to \$500. The program also helped to increase public understanding of the importance of energy conservation in all its applications.

In mid-1982, a federal contract of \$490,000 was awarded for a pilot study to test and refine elements of a super energy-efficient (SEE) housing demonstration program. This program was expected to assist in the construction of up to 300 energy efficient houses across Canada during a two-year period ending in 1984. In September 1983 there were 270 builders selected across Canada to build such homes, designated R-2000, under the second phase of the SEE program.

**Federal-provincial projects.** Federal funds of \$113 million were made available over the five-year period 1979-84 for federal-provincial demonstration agreements. These projects have covered many conservation applications in industry, and in the building and transportation sectors.

A 1982 report of the Canadian industry program for energy conservation (CIPEC) indicated an overall improvement in energy efficiency of 15.4%. This was achieved during 1972-82 mainly by low capital cost measures. Industry previously exceeded its 1980 goal of 12% and remains committed to its goal of 23% for 1985.

**Energy R&D.** The federal commitment to energy R&D was reaffirmed. A \$31 million increase in federal

funds brought the 1983-84 allotment for this type of research to \$333 million. The office of energy research and development in the federal department of energy, mines and resources (EMR Canada) served as the secretariat to an interdepartmental panel on energy R&D. In May 1982 a \$40 million increase in R&D funding was announced, bringing to \$288.8 million the total federal energy R&D budget for 1982-83.

#### 11.2.4 Legislation

During 1982 Parliament passed eight new acts giving legal authority to initiatives of the NEP. These were: an act to amend the Petro-Canada Act; an act to amend the Department of Energy, Mines and Resources Act; an act respecting petroleum incentives and Canadian ownership and control determination and the amending of the Foreign Investment Review Act; an act respecting energy monitoring and the amending of the Energy Supplies Emergency Act, 1979, and the Oil Substitution and Conservation Act; an act respecting motor vehicle fuel consumption standards; an act to amend the Petroleum Administration Act and to enact provisions related thereto; an act to amend the Canada Business Corporations Act; and an act to amend the National Energy Board Act.

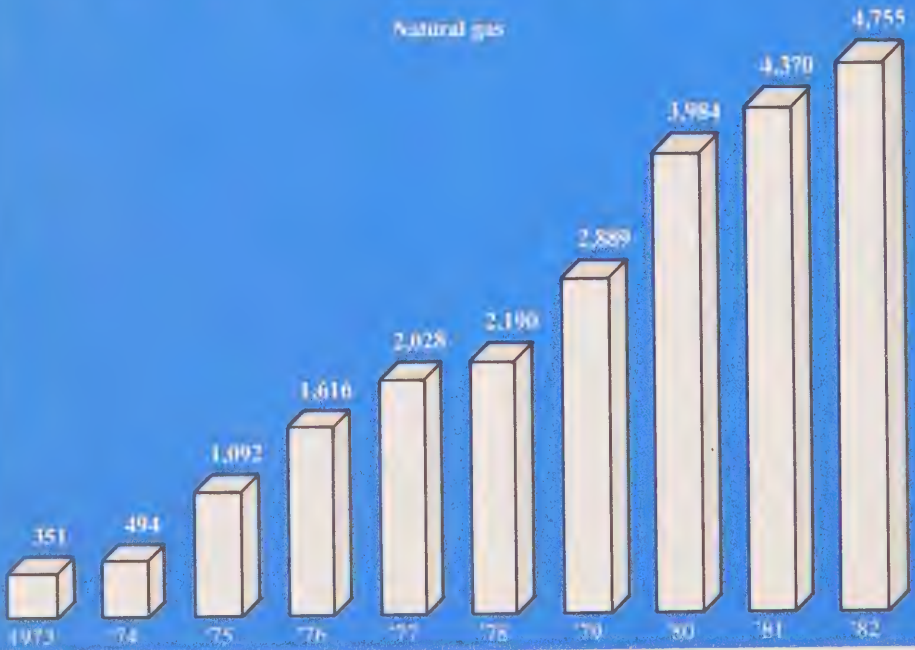
The Energy Administration Act (EAA) approved by Parliament in 1982, provided legislative authority to certain existing petroleum taxation measures, including the Canadian ownership special charge (which provides the federal government with revenue for public acquisition of petroleum interests); and the transportation compensation fuel recovery charge (to cover the extra transportation costs of moving domestic crude oil from Montréal to Atlantic refineries). In addition, the EAA raised the ceilings of the oil export charge and the petroleum compensation charge (PCC) and broadened the scope of the PCC, enabling implementation of a blended price system.

In mid-1982 Parliament passed legislation to establish the Co-operative Energy Corp. (Co-Enerco), an association of co-operative financial and marketing institutions actively participating in the Canadian oil industry. Up to \$100 million were being provided by the federal government for a five-year period ending in 1987, to match investment funds generated by participating co-operative organizations.

#### 11.2.5 Renewable energy sources

Public and private sector activity in renewable energy development has been increasing and received a major boost with the introduction of the NEP. Federal expenditures for renewable energy programs for 1982-83 were estimated at \$28.5 million, with \$34 million allotted for 1983-84. These funds would be available for research, development and demonstration projects involving renewables other than large-scale hydroelectric power.

Chart II.1  
Exports to the United States  
Millions dollars



**Biomass.** A forest industry renewable energy program (FIRE) was designed to increase the use of biomass (wood, municipal and agricultural wastes, and peat) as a source of energy. By mid-1983, grants totalling \$58 million for 124 projects resulted in benefits including the creation of 5,900 person-years of new employment, fuel savings equal to more than 7 million barrels of oil per year, and private sector spending over \$375 million on Canadian equipment and services.

In early 1982, Canertech Inc. announced its involvement in a biomass-based synthetic gas demonstration project at St-Juste-de-Bretenières, Que. The corporation invested \$5 million in this project. Canertech Inc. opened its Winnipeg headquarters in May 1981 and was established under the NEP as a Crown corporation dedicated to supporting commercial production of renewable energy and conservation technology.

**Solar energy.** Progress has been made toward diversification of energy supply and reduction in heating costs through programs such as a solar domestic water heating demonstration program, which funded the installation of nearly 2,000 solar hot water systems in 40 different projects across Canada.

**Wind energy.** The National Research Council of Canada (NRC) and Hydro-Québec have collaborated on Project Aeolus, involving the design and construction of one of the world's most powerful wind-driven generators. The new wind turbine was expected to begin operation in 1983, opening up a large market domestically and abroad. The federal government was providing up to \$17.6 million for this project.

### 11.3 Energy supply and demand

Canada's primary energy needs are met by oil, natural gas, coal, uranium and hydroelectricity. In primary energy consumption the share of oil as a source during 1979 was 54.5%, natural gas 23.0% and coal 11.0% with some 11.5% of energy needs being met by hydro and nuclear power. The corresponding figures for 1982 were 46.9% for oil, 24.2% for natural gas, 14.1% for coal, 13.8% for hydro and nuclear power.

A marked change in the primary energy export-import balance ranged from a deficit of some \$100 million in 1966, on a trade balance basis, to a surplus of almost \$2 billion in 1979 and \$5 billion in 1982.

### 11.4 Oil and natural gas

#### 11.4.1 Production and consumption

**Crude oil and equivalent.** Production had increased by about 105% in the seven-year period to 1973, declined during the period 1974-78, and increased

slightly in 1979 before falling off again, with production in 1982 the lowest since 1969.

In 1982 total crude oil and equivalent production in Canada decreased by 1.4%, from 80.3 million cubic metres in 1981 to 79.2 million in 1982. There was a 2.6% increase in conventional light and medium crude oil from 57.3 million cubic metres in 1981 to 58.7 million in 1982. Condensate production dropped by 7.6% to 5.7 million cubic metres. Heavy crude oil production decreased from 9.9 million cubic metres in 1981 to 6.8 million in 1982. Synthetic crude oil production for 1982 was 15.3% above 1981, amounting to 8.0 million cubic metres for the year.

Reduced production emanated from a significant decrease in consumer demand for oil and gas products in 1982, precipitated by the downturn in the economy and oil conservation and substitution measures. Demand for refined petroleum products fell by 11.1% in 1982 to 86.0 million cubic metres from 96.8 million in 1981.

Domestic oil prices continued a gradual move upward. During 1982 the price of old conventional oil (discovered before January 1, 1981) at the wellhead received two price increases of \$14.16 per cubic metre each on January 1 and July 1, as scheduled under the 1981 federal-provincial pricing agreement. The wellhead price of old conventional oil rose to \$147.88 per cubic metre on January 1, and \$162.04 on July 1. In 1982 producers of new oil (oil found after December 31, 1980) received \$278 per cubic metre of crude. This decreased to \$272.90 per cubic metre by the end of the year, due to the drop in the world price of crude.

The cost of importing oil into Montréal at the end of 1982 was \$201.63 per cubic metre, a decrease from \$222.70 per cubic metre at the end of 1981.

**Natural gas.** In the 12-year period to 1977, production of marketable natural gas and domestic demand increased markedly. The natural gas industry encountered marketing problems in 1981 and 1982 when supply far exceeded demand. In mid-1983 the federal government announced an incentive pricing program aimed at expanding domestic and export markets.

Natural gas prices as measured at the Toronto city-gate averaged \$2.42/GJ (gigajoule) in 1981, rose to \$2.68/GJ in February 1982 and \$3.05/GJ in September 1982.

In mid-1983, an 11% drop in the export price of natural gas brought the price from US\$4.94 per million BTU (per 1 054 megajoules) to US\$4.40 per million BTU. This decrease was intended to make Canadian gas more competitive with domestic gas in the US market.

#### 11.4.2 Exploration and development

During 1982 Western Canada, including Northwest Territories, was the centre of activity and accounted

for 6,264 of the wells drilled. About 80% were drilled in Alberta. Exploratory drilling for oil and gas on Canada Lands continued at about the same level as in 1980 and 1981, with a total of 23 wells reaching the total depth expected. Eight discoveries were made on Canada Lands, including three gas finds on the Scotian shelf, an oil discovery on the Grand Banks near Hibernia, and two gas discoveries in the Beaufort Sea. These discoveries were relatively small, and did not contribute significantly to Canada Lands reserves.

Successful delineation wells were drilled in the Hibernia and Venture structures off the East Coast, at Tarsiut in the Beaufort Sea, and on the Cisco structure in the Arctic islands.

In the Mackenzie-Beaufort Sea area seven wells were drilled to total depth in 1982, including four wildcats and three delineation wells, the latter on the Tarsiut structure. Four wells, although small, were significant.

During 1982 five wells were drilled in the Arctic islands, the same number as in 1981. Four of these were offshore wells from reinforced ice platforms in channels between the islands, while the fifth was an onshore well, a dry hole, on eastern Banks Island. Results were generally disappointing compared with 1981 when three discoveries were recorded.

In July 1982, Esso began development drilling at Norman Wells, NWT, in preparation for a water flood recovery system designed to extract oil from a large part of the field underlying the Mackenzie River. Actual production from this field was scheduled to start in 1985, after completion of a pipeline from Norman Wells to Zama in northern Alberta.

Throughout 1982 there was considerable interest in Western Canada because of significant oil discoveries in mainly previously known oil regions. This search has been encouraged by the higher price being given to new oil, and provincial incentives. As a result, the provinces of Manitoba, Saskatchewan and Alberta recorded a higher level of oil-directed activity than in the previous two years.

#### 11.4.3 Reserves

The Canadian Petroleum Association (CPA) estimated Canada's remaining established conventional crude oil and equivalent reserves in 1982 to be 1.2 billion cubic metres. Using the 1982 conventional production of 71 million cubic metres the reserves-to-production ratio (reserves life index) at the end of 1982 was 15.7 years.

At the end of 1982 the CPA estimated the remaining established reserves of liquefied petroleum gases at 104 million cubic metres. The reserves-to-production ratio at the end of 1982, using the 1982 production level of 13 million cubic metres, was 8.1 years.

At the end of 1982 Canada's marketable natural gas reserves amounted to about 2.6 trillion cubic

metres, a significant increase over the 1.7 trillion in reserves estimated in 1973. These known reserves do not include a further resource potential on Canada Lands, estimated to about 8.5 trillion cubic metres. Production during 1982 amounted to 69.3 billion cubic metres, with total sales in Canada and the US reaching \$10.5 billion, an increase in value of nearly 70% since 1979. The reserves life index was estimated to be equal to 37.4 years at the end of 1982, about the same level estimated in 1981.

### 11.5 Oil refining

The Canadian refining industry experienced a difficult year during 1982 due to the declining domestic demand for petroleum products which resulted in surplus refining capacity. Multinational oil companies closed some refineries in Quebec, Ontario and British Columbia. Refinery capacity dropped another 2.7 million cubic metres. The remaining plants operated at about 75% capacity.

The crude oil refining capacity of all operating refineries in Canada at the end of 1981 totalled 130.0 million cubic metres, a decrease of 6.9 million since 1979. This reduction was primarily due to the closing of Gulf's Point Tupper, NS refinery. Minor increases in capacities of some refiners tended to offset slight reductions at others.

Nevertheless, there were some optimistic developments in the refining sector. Refinery expansion in Calgary and Edmonton increased Alberta capacity by almost 10%. In July 1982 a \$335 million plan was announced to upgrade Suncor's skimming refinery at Sarnia. Work was concluded in the summer of 1983 on a comparable project at Ultramar's St. Romuald refinery in Quebec. Petrosar Ltd. in Sarnia, also announced its intention to install a \$50 million vacuum tower to reduce its residual oil output.

In Montréal, Petro-Canada moved toward the installation of a 300 000 cubic metres-a-year residual oil hydrocracker to demonstrate, on a commercial basis, the Canada Centre for Mineral and Energy Technology's (CANMET) new heavy oil upgrading technology.

These projects will reduce heavy oil output, will mean greater production of desirable transportation fuels and petrochemicals, and will reduce the amount of crude oil feedstock needed to produce these products.

### 11.6 Transportation

#### 11.6.1 Natural gas

Natural gas transmission lines serve major Canadian centres from Vancouver to Trois-Rivières and transport gas to the international border for US markets from California to New England.

Public hearings began in mid-1983 to select a builder for the Vancouver Island natural gas pipeline.

Chart 11.2  
**Federal spending on energy R&D**  
Million dollars



This proposed project has been estimated to cost in the range of \$500 million.

A distribution system expansion program (DSEP), launched by EMR Canada in early 1982, provides grants to utilities expanding into new market areas. During 1982, \$37 million was spent on some 380 projects.

In mid-1983, the TransQuébec & Maritimes (TQ&M) pipeline was still under construction to Québec City. Gas service was brought as far as Trois-Rivières in 1982 and was expected in Québec City in late 1983. The NEP update significantly changed this pipeline project. A \$500 million fund was made available to the gas distributor (Gaz Inter-Cité Québec) for the construction of the major laterals off the main transmission line. It was expected that gas would be brought into the Eastern Townships in 1983 and into the Lac St-Jean region in 1984.

TransCanada Pipeline Ltd. undertook a major construction program in 1982, expanding the capacity of its line across the Prairies and building the North Bay short cut in eastern Ontario. This short cut was a \$450 million, 400-km project which greatly shortened the distance gas must travel to reach new Quebec markets. It was brought into service in December 1982.

The projected Alaska Natural Gas Transmission System (ANGTS) was designed to deliver natural gas from Prudhoe Bay, Alaska through Canada to United States markets in the midwest (via an eastern leg) and California (via a western leg). Total length of the pipeline was expected to be more than 7 700 km. Arrangements had been made to pre-build the Canadian section of the pipeline facilitating the sale of Canadian gas to the US before construction began on the main line from Alaska. Albertan gas started flowing on October 1, 1981 to the US through the western leg. Construction of the 636-km eastern leg was completed and on September 1, 1982 shipments of gas via this line commenced. In April 1982 sponsors of ANGTS reconfirmed their commitment to the project. However, due to economic and marketing difficulties, the project has been delayed to late 1989.

Polar Gas is proposing to construct a Y-line connecting both Arctic islands (eastern) and Mackenzie Delta (western) gas reserves for delivery to southern Canadian markets. The earliest the project could start is 1990. Its facilities would extend over 5 000 km with a throughput estimated at 61 million cubic metres a day.

An Arctic pilot project (APP), sponsored by Petro-Canada, Nova, Dome Petroleum and Melville Shipping, was proposed to liquefy Eastern Arctic gas and ship the liquefied natural gas (LNG) by ice-breaking tankers to a port in Eastern Canada where it would be regasified. Originally, the ultimate destination of the gas was to be the US market, but by

late 1982 APP sponsors had examined the possibility of delivering gas to European markets. In mid-1982 TransCanada Pipeline Ltd. withdrew an application to the NEB to construct and operate the regasification terminal. APP sponsors asked that NEB hearings be rescheduled to address the northern component of the project separately, before the southern component is considered. The NEB decided to suspend indefinitely all hearings on the APP until project sponsors obtained more information on the destination of the natural gas.

In late September 1983 the report of a task force on pipeline construction costs was released. It dealt mainly with ways to minimize the costs of oil and gas pipeline construction. The study included the participation of pipeline companies, contractors, material suppliers, labour unions, oil and gas producers, and provincial, territorial and federal government departments and agencies.

### 11.6.2 Oil pipelines

Canadian oil moves to markets through a network of oil pipelines extending from the oil fields of Western Canada to Vancouver, and east as far as Montréal. This network serves Canadian refineries from British Columbia to Quebec, inclusive, and US markets in the Puget Sound, midwest, and upper New York state areas.

Principal components are the trunk lines Interprovincial Pipe Line Ltd., and the Trans Mountain Pipe Line Co. Ltd. Both lines start in Edmonton and are fed crude oil by a network of gathering lines. Outside Alberta, the Interprovincial Pipe Line Ltd. receives and transports Saskatchewan and Manitoba crude oil eastward. Trans Mountain Pipe Line Ltd. operates westward and receives BC crude oil for delivery to Vancouver with subsidiary operating branch lines to refineries in the state of Washington.

In November 1981 the NEB provided Interprovincial Pipe Line (NW) Ltd. with authority to proceed with construction on a proposed 866-km pipeline from Norman Wells, NWT to Zama in northern Alberta. The line is to carry 1.6 million cubic metres a year of crude oil and natural gas liquids. The projected completion date for the line was mid-1985.

### 11.7 Coal

Canada first became a net exporter of coal in 1981, with a trade surplus of \$203 million. Then came a year of adjustment for the coal industry as the economic climate forced cutbacks and reduced activity in many sectors. Despite the adjustments, Canada strengthened its position as a net exporter of coal and in 1982 this trade surplus grew to \$244 million.

In 1982 total coal production was 42.8 megatonnes (million tonnes) valued at \$1,298 million, up 7.0% in volume from 40.1 megatonnes valued at \$1,073 million in 1981. Output totalled 39.3 megatonnes

from Western Canada and 3.6 from Eastern Canada. Coal imports were 15.7 megatonnes in 1982, up from 15.0 in 1981, reflecting largely increased thermal coal demand in Ontario. Exports totalled 16.0 megatonnes, up from 15.8 in 1981.

Canadian coal utilization in 1982 was mixed. Thermal coal demand increased to 35.9 megatonnes from the 1981 demand of 32.0. The quantity of thermal coal required for electrical generation in 1982 was up 13% to 33.7 megatonnes from 29.9 in 1981. General industrial usage of coal increased by 3% in 1982 to 2.0 megatonnes. Space heating usage of coal grew by 3.7% in 1981 to 222 kilotonnes (thousand tonnes) and jumped by 12.6% in 1982 to 250 kilotonnes. Metallurgical coal demand was down 13% in 1982 to 5.6 megatonnes from 6.4 in 1981.

Metallurgical coal dominated world coal trade and accounted for 13.8 megatonnes or 87.3% of all Canadian coal exports in 1981 and about 13.0 megatonnes or 81% of all Canadian coal exports in 1982. In both years, approximately 67% of total coal exports went to Japan. Reduced demand from Japanese and other nations' steel industries in 1982 resulted in short-term closures of two mines in Alberta and one in British Columbia. Thermal coal exports have been adversely affected by the current recession. They were expected to increase as international steam coal markets developed in response to rising petroleum price, energy diversification policies and an increasing supply of competitively-priced thermal coal. Supplies now exceed demand and many countries have delayed making large long-term thermal coal commitments. In 1982 thermal coal exports as a percentage of total coal exports rose to 19% or 3.0 megatonnes from 12.2% or 1.9 megatonnes in 1981. The advancement of several thermal coal projects and a number of smaller thermal and metallurgical coal contracts signed in 1982 with Asian and Latin American buyers were expected to result in increasing exports by the mid-1980s.

### 11.7.1 Production areas

**British Columbia** consumes very little coal yet is second only to Alberta in its coal resource endowment and production. Most of BC production is bituminous and destined for export. Although production in both 1981 and 1982 was at the same level, 11.8 megatonnes, the value rose from \$541 million to \$635 million, due mainly to escalation clauses in export contracts.

Several new coal developments are planned in northeast BC. Quintette Coal Ltd. and Teck-Bullmoose Coal Inc. were expected to deliver 8 megatonnes of metallurgical coal annually to Japan for a period of 15 years beginning in early 1984. This is part of a northeast BC coal development project, the largest resource development under way in

Canada, and involves an investment of more than \$2 billion.

Mining activity in the Crowsnest Pass area of southeastern BC increased as the Line Creek and Greenhills mines loaded their first train loads of thermal coal in 1982. Both these mines began production of metallurgical coal in 1983. Meanwhile expansion work continued at the Elkford and Byron Creek Collieries mines.

**Alberta** coal resources are the most extensive in Canada. There are producing mines in three geographical regions: mountain, foothills and plains. The plains region supplies essentially all domestic production of sub-bituminous coal.

In 1982 coal production in Alberta reached 20.1 megatonnes. Bituminous production accounted for 7.1 megatonnes and sub-bituminous for the remainder. This output was valued at \$393 million, an increase over 18.4 megatonnes valued at \$325 million, produced in 1981.

Alberta consumed 13.4 megatonnes of thermal coal in 1982, an increase of 14% over 1981 largely because of new coal-fired electricity generating capacity. In 1981, a 375-MW.h (megawatt hour) unit came on stream at the Battle River station. Twin 400-MW.h units at Keepphills, 375-MW.h units at Sheerness and the 800-MW.h Genesee station were scheduled to come on stream before the end of the decade. These new stations will require 9 megatonnes of thermal coal annually for full capacity operation.

Despite a five-month strike at one of the major mines, metallurgical coal production in 1982 exceeded 3.5 megatonnes, up from 3.3 megatonnes in 1981. Most of Alberta's metallurgical coal was destined for export markets.

**Saskatchewan.** Lignite is the only rank of coal produced. In 1982, production reached 7.5 megatonnes valued at \$76 million, an increase from 6.8 megatonnes valued at \$56 million in 1981. Saskatchewan uses more coal in its primary energy balance than any other province (31%). About 79% of 1982 production was consumed in the province to generate electricity.

**Ontario** is not a coal producer but is Canada's largest coal consuming province. Total consumption in 1982 was 18.4 megatonnes, up from 17.8 in 1981. In 1982 about 67% of this coal was consumed in generating electricity. Although most of the coal used in Ontario was imported from mines in Pennsylvania and West Virginia, new electricity generation developments will rely increasingly more on coal from Western Canada.

**New Brunswick** has only limited resources of high-volatile bituminous coal. Production during 1982 was 499 kilotonnes valued at \$25 million, down 5% from 524 kilotonnes valued at \$22 million in 1981. Virtually all coal produced in New Brunswick is consumed by the New Brunswick

Electric Power Commission for use in its coal-fired power stations.

**Nova Scotia.** Major coal resources in the Atlantic provinces lie under and off the shore of Cape Breton Island. Three mines operated by the Cape Breton Development Corp. (DEVCO) accounted for 90% of NS production in 1981 and 88% in 1982. Production in 1982 was 3.1 megatonnes with a value of \$170 million, up from 2.5 megatonnes valued at \$128 million in 1981. Coal production in 1981 was lower than 1980 production levels due to a four-month miner strike at the DEVCO mines.

**Research and development.** In Western Canada, the BC government and a Japanese corporation were conducting a pre-feasibility study of a \$5 billion coal liquefaction plant near Hat Creek, west of Kamloops.

The Alberta government and the private sector continued to study the slurry pipeline option: transporting coal in water, methanol and other media via pipelines.

In Eastern Canada, technologies associated with the liquefaction of NS coal were being evaluated.

Coal gasification was considered but the current natural gas reserve and supply situations have made developments in this area uneconomical.

## 11.8 Uranium

Production in 1982 was an estimated 8 050 tonnes of uranium (t U). Shipments of primary uranium were estimated at 8 189 t U valued at \$815 million. Production in 1981 was 7 722 t U, an increase of 8% over 1980. The byproduct output, which is relatively small, is not included in the Canadian total because the source materials are exported from the United States and the extracted uranium is sold to US companies. Shipments of primary uranium in 1981 were estimated at 7 507 t U valued at \$794 million.

Canada had seven primary uranium producers until mid-1982, when the Eldorado mine in northern Saskatchewan and the Madawaska mine near Bancroft, Ont. ceased operating. Canada's first commercial byproduct uranium operation was idle throughout the year.

The short-term prospect for the uranium sector remained unchanged during 1982, as estimates of projected nuclear generating capacity and in turn uranium requirements were adjusted downward. The combined effect of the general economic slowdown, uranium supply exceeding demand, and swelling uranium inventories led to further production cutbacks, mine closures and project deferrals. Although the uranium market remained depressed during 1982, some signs of recovery were evident by the end of the year, as the uranium spot-market price rose slightly from the seven-year low reached in August 1982.

Levels of Canadian uranium exploration activity declined sharply in 1981 in response to continued

erosion of both the spot-market price and short-term sales prospects for uranium. Uranium exploration expenditures in Canada during 1981 amounted to \$102 million, 20% less than the 1980 total of \$128 million. Exploration and surface development drilling for uranium had dropped by 30% to some 359 000 metres, down from the record 503 000 metres in 1980.

During 1982 new export contracts totalled 7 500 t U, bringing the total amount of uranium under export contracts reviewed since September 1974 to 87 000 t U. Forward export commitments under all active contracts, including those in place prior to September 5, 1974 were estimated at almost 60 000 t U. Forward domestic commitments approached 80 000 t U.

EMR Canada's uranium resource appraisal group (URAG) completed its seventh (1980) assessment of Canadian uranium resources in early 1981. Comparison of the 1980 estimates with those published a year earlier indicates a 5% decrease in the measured category, a slight increase in the indicated category and a 4% decrease in the inferred category.

The total of the three resource categories is less than that reported in the 1979 assessment of 14 000 t U, representing a net decrease of about 2%. If the 1980 production and average processing recoveries are considered, however, the reduction over the period amounted to only 6 400 t U, or a decrease of just over 1%. Changes in the distribution of resources among individual categories resulted from the technical-economic re-evaluation of some segments of the Beaver Lodge deposits, the continued evaluation of the Midwest Lake deposit and the reassessment of the Key Lake deposits, all in northern Saskatchewan.

In early 1982, the Organization for Economic Co-operation and Development (OECD) released the results of the eighth in a series of world uranium supply assessments conducted jointly by its Nuclear Energy Agency (NEA) and the International Atomic Energy Agency (IAEA). The study showed that Canada accounts for some 13% of the world's low-cost reasonably assured resources, ranking fourth behind Australia, South Africa and the United States. Of greater significance in terms of Canada's future capability as a uranium supplier was its position with respect to estimated additional resources. In the world total of some 2.7 megatonnes of uranium reported in this category, with deposits mineable at costs up to US\$130/kg U, Canada accounts for 28%, ranking second behind the United States.

In British Columbia, the report of a royal commission of inquiry into health and environmental protection in uranium mining (the Bates commission) was tabled in the legislature in March 1981. It recommended that, providing a licensing procedure for uranium exploration is instituted in British

Columbia, the moratorium on uranium exploration should be lifted, because with proper control the possible risks attendant on this activity would be outweighed by the benefits of the knowledge gained. Despite the recommendation, the BC government indicated that the moratorium on uranium mining and exploration, announced in February 1980, would continue.

On February 6, 1981 the summary report of a 13-month Key Lake, Sask. board of inquiry was made public. The board's recommendations provided a basis for the conditions under which the \$500 million Key Lake project would receive final approval. The measures proposed by the Key Lake Mining Co. (KLMC) were judged adequate to protect environmental quality and to safeguard occupational health and safety. In late August 1981, KLMC signed a 21-year surface lease agreement with the department of Northern Saskatchewan, opening the way for ore body development.

On September 13, 1982 the minister of state for mines announced details of a five-year federal research program aimed at expediting the development of technology to determine the harmful effects of wastes resulting from the mining and milling of uranium. It was proposed that the \$9.5 million program would be administered by a national tailings program office to be established in Ottawa.

In October 1982 the Saskatchewan government announced the repeal of compulsory Crown participation in mineral development. It had previously been required to offer the provincial government up to 50% equity interest in any new mineral development in the province.

## 11.9 Electric power

### 11.9.1 Development

Data indicated that net additions in generating capacity during 1982 totalled 1 535 MW raising the total installed generating capacity by 1.8% to 85 547 MW. The 1982 capacity additions consisted of 640 MW hydro, 214 MW conventional thermal and 680 MW nuclear. Total installed generating capacity increased by 2 013 MW in 1981, a 2.5% increase over 1980.

Total electricity production decreased in 1982 by 0.9% from 1981. This decrease was linked to reduced industrial activity in Canada. The percentage distribution between generating sources in 1981 was 69.3% from hydro, 20.8% from conventional thermal and 9.9% from nuclear. In 1982, this changed to 68.6% from hydro, 22.6% from conventional thermal and 8.8% from nuclear.

### 11.9.2 Sources

**Hydro.** Water power has been developed in all provinces and territories except Prince Edward Island. In 1982 hydro generation provided over 95%

of electrical generation in British Columbia, Manitoba, Quebec and Newfoundland, about 65% in the territories and less than 40% in the remaining provinces.

**Thermal power.** In 1982 conventional thermal plants accounted for about 94% of electrical generation in Alberta, 84% in Nova Scotia and 76% in Saskatchewan, 64% in New Brunswick, and 33% in Ontario. Conventional thermal generation was also prominent as a source of electrical generation in Prince Edward Island although 90% of electricity consumed there was received from New Brunswick.

**Nuclear thermal power** accounted for 8.8% of Canada's total electrical generation in 1982. The first large-scale commercial application of nuclear generation by CANDU was in 1971 when the first unit of the Pickering, Ont. nuclear generating station achieved full-power operation. There are now five commercial nuclear stations in Canada. Pickering A (four reactors), Bruce A (four reactors) and Douglas Point (one reactor) have been operating in Ontario for several years. In 1982, these Ontario units provided about 1.6% of Canada's total primary energy demand. Point Lepreau (one reactor) in New Brunswick came on stream in 1982. Gentilly II (one reactor) in Quebec came on stream in 1983. In 1982, nuclear generation accounted for 30.8% of electricity generated in Ontario and 3.2% in New Brunswick.

### 11.9.3 Federal policy

In relating objectives of the NEP to electrical energy, a number of incentive programs were developed to encourage substitution from oil to more plentiful and less expensive resources. Under grants provided by the Canada oil substitution program (COSP), 107,000 conversions from oil to electrical heating took place between May 1981 and December 1982.

Directly associated with electrical energy and a resultant from the NEP are contributions to the Canadian Electrical Association (CEA) R&D fund and increased support to the National Research Council for high voltage direct current (HVDC) and dielectrics research. These totalled \$2.3 million in the 1982 fiscal year. Funding of additional programs such as heat pumps, rail electrification, small scale hydro and electric vehicles, totalled \$11.2 million. These expenditures are in addition to the major R&D program of Atomic Energy of Canada Ltd. for nuclear energy development in which \$153 million was spent in the 1982 fiscal year.

### 11.9.4 Provincial policy

A council of maritime premiers and the federal energy minister decided early in 1981 not to proceed with a proposed Maritime Energy Corp. Instead they agreed to establish a co-ordinating committee comprising representatives of the three provinces' utilities, and observers from the federal and the three provincial governments.

A decision was made in 1981 to proceed with plans for a \$3.2 billion 618-MW hydro development at the Muskrat Falls site near Churchill Falls in Labrador, pending settlement of a contractual dispute affecting the Upper Churchill Falls. The governments of Newfoundland and Canada will be the shareholders in this project which includes a direct transmission link to the Island of Newfoundland.

In mid-1982, Alberta announced a two-year delay in its decision to participate in the western grid plans in order to evaluate its Slave River or alternatively, its Peace River project. The western grid would transmit electricity from Manitoba's 1 200 MW Limestone hydro plant to both Saskatchewan and Alberta.

### 11.9.5 Regional activities

**Atlantic provinces.** Provincial electrical energy demand in 1982 decreased by 3.7% in Newfoundland, by 1.3% in Prince Edward Island, by 2.8% in Nova Scotia and by 5.1% in New Brunswick.

Discussions over a second 680-MW nuclear unit at Point Lepreau, NB focus on the existence of export markets for that electricity. In 1982 Nova Scotia began commissioning small-scale hydro units.

**Quebec.** Provincial electrical energy demand fell by 2.5% in 1982. The last five 333-MW units were completed at La Grande Site 2 in 1981. The 266-MW nuclear unit at Gentilly II was tested for final approval in 1982.

**Ontario** electrical energy demand fell by 2.0% relative to 1981. In 1981, Ontario Hydro added a 150 MW-coal-fired unit to its Thunder Bay installation and six gas turbine units with a total generating capacity of 28 MW at Pickering B. Ontario utilities are commissioning several small-scale hydro units.

**Prairies.** Provincial energy demand increased in Manitoba because of colder weather during the 1982 winter months than in 1981 and in Alberta partly because of the increased use of electricity in pumping stations for pipelines. Electrical energy demand increased by 3.4% in Manitoba, by 0.2% in Saskatchewan and by 8.0% in Alberta. The Manitoba HVDC Research Centre (heavy voltage direct current) was established in 1982.

**British Columbia.** Electrical energy demand increased by 1.4% in 1982. The Peace Canyon hydro project was officially opened in 1981. In full production, this project will generate 3.5 terrawatt hours (million megawatt hours) annually — 7.6% of BC's domestic sales in 1982. The 2 000-MW Hat Creek project was indefinitely postponed in 1982. BC Hydro and BC Rail will co-operate in setting the infrastructure for North America's first electrified railroad as part of the northeast coal development.

**The territories.** For both Yukon and Northwest Territories, the 3% decrease in electricity demand was attributed to the effects of the recession on the international market for metals which in turn affected mining activity in the North.

### Source

11.6 - 11.9 Energy Policy Co-ordination Branch, Energy Policy Analysis Sector, Department of Energy, Mines and Resources (Co-ordinator, Paula Tissot); Energy Section, Manufacturing and Primary Industries Division, Statistics Canada (Co-ordinator, Don Wilson).

### Selected References

- Coal mines.* Statistics Canada 26-206, Ottawa, 1983.
- The crude petroleum and natural gas industry.* Statistics Canada 26-213 (annual), Ottawa, February 1984.
- Electric power statistics*, vol.11, *annual statistics*. Statistics Canada 57-202, Ottawa, September 1983.
- Electricity in Canada*, update 1983. Electrical Branch, Department of Energy, Mines and Resources, Ottawa, 1983.
- Energy review*, 1982. Department of Energy, Mines and Resources, Ottawa, 1983.
- The national energy program*, update 1982. Department of Energy, Mines and Resources, Ottawa, 1982.
- Oil pipeline transport.* Statistics Canada 55-201, Ottawa, 1984.
- Quarterly report on energy supply — demand in Canada.* Statistics Canada 57-003 (quarterly), Ottawa, February 1984.
- Refined petroleum products.* Statistics Canada 45-004 (monthly), Ottawa, 1984.

# TABLES

..	not available	1 000 000 000 000 = 10 <sup>12</sup>	tera	T
...	not appropriate or not applicable	1 000 000 000 = 10 <sup>9</sup>	giga	G
—	not or zero	1 000 000 = 10 <sup>6</sup>	mega	M
--	Too small to be expressed	1 000 = 10 <sup>3</sup>	kilo	k
e	estimate	100 = 10 <sup>2</sup>	hecto	h
p	preliminary	10 = 10 <sup>1</sup>	deca	da
r	revised	1 litre = 0.220 gallon		
Tables may not add due to rounding		1 000 litres = 1 kL = 1 cubic metre = m <sup>3</sup>		
		1 000 joules = 0.9482 BTU		
		1 tonne (metric) = 1.023 tons (short)		

## 11.1 Canada's primary energy balance, 1979-82 (terajoules)

Year and item	Coal	Crude oil <sup>1</sup>	Natural gas <sup>2</sup>	NGL <sup>3</sup>	Electricity <sup>4</sup>	Steam <sup>5</sup>
1979						
Production	811 420	3 600 000	2 805 092	281 604	994 738	24 448
Exports	399 791	644 361	1 055 241	216 741	112 962	—
Imports	520 076	1 363 986	80	—	6 453	—
Stock variation <sup>6</sup>	51 331	9 572	29 719	-13 223	—	—
Other adjustments <sup>6</sup>	-4 002	—	13 381	-8 764	—	—
Available	876 372	4 310 253	1 733 590	69 322	888 228	24 448
Transformed to other energy forms <sup>7</sup>	829 619	4 318 463	104 088	18 060	—	—
Producers own consumption	225	2 187	—	2 724	..	—
Non-energy use	..	..	90 008	..	..	—
Energy use - final demand	46 529	..	1 553 329	..	..	24 448
Industrial	41 268	..	693 681	..	..	24 448
Transportation	—	..	90 841	..	..	—
Agricultural	—	..	12 704	..	..	—
Residential	4 180	..	402 806	..	..	—
Public administration	394	..	15 556	..	..	—
Commercial and institutional	690	..	337 741	..	..	—
Unaccounted for	—	-10 397	-13 836	..	..	—
1980						
Production	891 070	3 444 040	2 560 122	315 611	1 031 587	20 486
Exports	447 694	459 794	840 014	211 337	108 665	—
Imports	468 698	1 241 180	119	—	10 583	—
Stock variation <sup>6</sup>	-13 587	29 090	-14 038	16 571	—	—
Other adjustments <sup>6</sup>	2 749	—	10 417	-1 221	—	—
Available	928 409	4 196 335	1 744 682	86 482	933 505	20 486
Transformed to other energy forms <sup>7</sup>	880 517	4 207 608	83 966	25 508	—	—
Producers own consumption	184	..	—	1 285	..	—
Non-energy use	529	..	110 382	..	..	—
Energy use - final demand	47 180	..	1 522 769	..	..	20 486
Industrial	42 670	..	686 814	..	..	20 486
Transportation	—	..	76 019	..	..	—
Agricultural	—	..	12 977	..	..	—
Residential	3 383	..	413 863	..	..	—
Public administration	311	..	16 303	..	..	—
Commercial and institutional	815	..	316 793	..	..	—
Unaccounted for	—	-11 273	27 565	..	..	—
1981						
Production	969 541	3 093 448	2 526 338	316 309	1 084 295	30 327
Exports	464 207	363 207	803 566	199 980	127 341	—
Imports	448 733	1 137 827	112	—	5 387	—
Stock variation <sup>6</sup>	1 346	-18 710	21 976	8 048	—	—
Other adjustments <sup>6</sup>	-4 779	—	9 237	-20 534	—	—
Available	947 942	3 886 779	1 710 145	87 748	972 341	30 327
Transformed to other energy forms <sup>7</sup>	900 174	3 898 604	68 642	25 926	—	—
Producers own consumption	144	—	—	969	..	—
Non-energy use	511	—	102 299	..	..	—
Energy use - final demand	47 114	—	1 512 963	..	..	30 327
Industrial	42 135	—	646 595	..	..	30 327
Transportation	—	—	79 649	..	..	—
Agricultural	—	—	13 832	..	..	—
Residential	3 982	—	17 159	..	..	—
Public administration	260	—	338 815	..	..	—
Commercial and institutional	736	—	416 912	..	..	—
Unaccounted for	—	-11 826	26 241	..	..	—
1982						
Production	1 028 279	3 052 119	2 579 604	307 637	1 049 327	43 864
Exports	468 906	478 352	826 533	226 236	123 169	—
Imports	469 912	757 199	171	—	10 255	—

### 11.1 Canada's primary energy balance, 1979-82 (terajoules) (concluded)

Year and item	Coal	Crude oil <sup>1</sup>	Natural gas <sup>2</sup>	NGL <sup>3</sup>	Electricity <sup>4</sup>	Steam <sup>5</sup>
Stock variation	28 212	- 1 232	44 074	11 814	—	—
Other adjustments <sup>6</sup>	607	—	8 736	- 19 728	—	—
Available	1 001 680	3 332 198	1 717 902	73 487	936 413	43 864
Transformed to other energy forms <sup>7</sup>	954 043	3 328 761	60 999	26 978	—	—
Producers own consumption	178	—	—	..	..	—
Non-energy use	295	—	111 392	..	..	—
Energy use - final demand	47 164	—	1 546 026	..	..	43 864
Industrial	41 788	—	596 749	..	..	43 864
Transportation	—	—	72 950	..	..	—
Agricultural	—	—	15 611	..	..	—
Residential	4 042	—	468 235	..	..	—
Public administration	551	—	19 356	..	..	—
Commercial and institutional	783	—	373 125	..	..	—
Unaccounted for	—	3 438	- 516	..	..	—

<sup>1</sup>The general terms crude oil or crude oil and equivalent comprise conventional crude oil, condensate, synthetic crude oil and experimental crude oil.

<sup>2</sup>Marketable natural gas.

<sup>3</sup>Gas plant natural gas liquids, butane, propane and ethane.

<sup>4</sup>Hydro and nuclear only.

<sup>5</sup>Steam produced from nuclear sources.

<sup>6</sup>Includes interproduct transfers as well as other adjustments.

<sup>7</sup>For electricity and steam generation, coal coke production and for refined petroleum products.

### 11.2 Trade in energy (million dollars)

Item	1979	1980	1981	1982
Crude oil and equivalent				
Exports	2,405	2,899	2,505	2,729
Imports	4,497	6,919	8,004	4,985
Balance	-2,092	-4,020	-5,499	-2,256
Petroleum products <sup>1</sup>				
Exports	1,245	1,390	1,274	909
Imports	315	603	775	766
Balance	930	787	499	143
Natural gas				
Exports	2,889	3,984	4,370	4,755
Imports	—	—	1	1
Balance	2,889	3,984	4,369	4,754
Liquefied petroleum gases <sup>2</sup>				
Exports	525	699	939	1,095
Imports	4	3	3	5
Balance	525	699	939	1,095
Coal				
Exports	732	794	1,037	1,176
Imports	865	811	834	932
Balance	-133	-17	203	244
Coal products				
Exports	18	30	29	17
Imports	76	82	103	93
Balance	-58	-52	-74	-76
Electric energy				
Exports	729	773	1,123	1,120
Imports	1	3	6	5
Balance	728	770	1,117	1,115
Radioactive ores				
Exports	379	231	179	359
Imports	73	67	131	127
Balance	306	164	48	232
Elements and isotopes				
Exports	602	625	670	434
Imports	12	12	15	16
Balance	590	613	655	418

## 11.2 Trade in energy (million dollars) (concluded)

Item	1979	1980	1981	1982
Total				
Exports	9,524	11,425	12,126	12,594
Imports	5,843	8,500	9,872	6,930
Balance	3,681	2,925	2,254	5,664

<sup>1</sup>Contains values of selected petroleum products including products destined for non-energy consumption such as asphalt and lubricating oils and grease.

<sup>2</sup>Includes petroleum refinery and natural gas processing plant propane and butane.

## 11.3 Canada's crude oil imports, by country

Country	Quantity ('000 m <sup>3</sup> )				Value (\$'000,000)			
	1979	1980	1981	1982	1979	1980	1981	1982
Algeria	592	60	1 327	952	87	12	394	250
Egypt	394	—	—	—	83	—	—	—
Iran	2 342	—	—	450	336	—	—	115
Iraq	604	1 254	—	—	72	279	—	—
Kuwait	952	745	639	—	107	146	165	—
Libya	—	—	513	80	—	—	150	20
Mexico	—	552	3 121	3 255	—	130	802	754
Nigeria	—	153	373	246	—	41	112	64
Norway	—	—	350	—	—	—	97	—
Saudi Arabia	10 636	12 043	9 773	2 812	1,240	2,451	2,381	729
United Arab Emirates	—	265	127	—	—	62	63	34
United Kingdom	118	301	1 490	1 355	14	70	407	335
United States	7 521	7 211	4 029	3 693	1,094	1,690	1,173	985
Venezuela	11 900	10 003	8 686	6 509	1,436	2,014	2,210	1,653
Other countries	254	107	209	183	28	24	50	44
Total	35 313	32 694	30 738	19 662	4,497	6,919	8,004	4,985

## 11.4 Crude oil and equivalent production and value

Item and province	Production <sup>1</sup> ('000 m <sup>3</sup> )				Value (\$'000,000)			
	1979	1980	1981	1982	1979	1980	1981	1982
Crude oil	80 813	75 343	67 214	65 346	6,644	7,305	7,889	10,079
New Brunswick	1	1	1	1	--	--	--	--
Ontario	92	93	90	86	8	10	11	13
Manitoba	583	564	543	582	48	55	64	89
Saskatchewan	9 372	9 331	7 393	8 056	728	863	821	1,183
Alberta	68 483	63 192	56 980	54 375	5,683	6,178	6,744	8,451
British Columbia	2 140	2 002	2 036	2 073	169	189	236	329
Northwest Territories	142	161	172	173	7	11	13	14
Condensate	6 869	6 213	5 929	5 765	578	617	711	906
Saskatchewan	43	38	28	29	3	4	3	4
Alberta	6 609	6 005	5 747	5 580	558	597	690	877
British Columbia	217	171	153	156	17	16	18	25
Synthetic crude oil	5 909	7 966	7 199	8 134	792	1,717	1,548	2,053
Alberta	5 909	7 966	7 199	8 134	792	1,717	1,548	2,053
Total	93 591	89 522	80 342	79 245	8,015	9,639	10,148	13,038
New Brunswick	1	1	1	1	--	--	--	--
Ontario	92	93	90	86	8	10	11	13
Manitoba	583	564	543	582	48	55	64	89
Saskatchewan	9 415	9 369	7 421	8 085	731	867	824	1,187
Alberta	81 001	77 163	69 926	68 089	7,033	8,492	8,982	11,381
British Columbia	2 357	2 173	2 260	2 229	186	205	254	354
Northwest Territories	142	161	172	173	7	11	13	14

<sup>1</sup>Net production.

**11.5 Petroleum supply and demand (thousand cubic metres)**

Item	1979	1980	1981	1982
<b>Supply</b>				
Production of crude oil and equivalent	93 591	89 522	80 342	79 245
Imports	37 422	35 655	33 290	22 089
Crude oil and equivalent	35 313	32 694	30 738	19 662
Products	2 109	2 961	2 552	2 427
Interproduct transfers	- 476	- 54	- 831	- 999
Butane received by refineries for blending	876	891	906	943
Propane and butane to natural gas liquids stream	- 1 352	- 945	- 1 737	- 1 942
<b>Total, supply</b>	<b>130 537</b>	<b>125 123</b>	<b>112 801</b>	<b>100 335</b>
<b>Demand</b>				
Domestic demand	100 491	98 714	92 143	82 309
Motor gasoline	38 315	38 475	37 228	34 272
Diesel fuel	14 648	15 053	14 923	13 627
Kerosene, stove oil	1 773	1 546	1 219	1 207
Light fuel oil	14 263	13 772	11 472	10 505
Heavy fuel oil	15 743	15 089	12 806	10 386
Aviation fuels	4 784	4 813	4 689	4 240
Non-energy products	10 211	9 043	8 846	7 401
Other <sup>1</sup>	754	923	1 960	673
Exports	22 570	17 523	14 225	15 845
Crude oil and equivalent	16 728	12 426	9 501	12 158
Products	5 842	5 097	4 724	3 687
<b>Total, demand</b>	<b>123 061</b>	<b>116 237</b>	<b>106 368</b>	<b>98 154</b>
Inventory changes and other adjustments <sup>2</sup>	7 476	8 886	6 433	2 181

<sup>1</sup>Includes petroleum coke and still gas.<sup>2</sup>Includes producers consumption.**11.6 Natural gas production and value**

Province	Production <sup>1</sup> ('000,000 m <sup>3</sup> )				Value (\$'000,000)			
	1979	1980	1981	1982	1979	1980	1981	1982
New Brunswick	3	2	2	2	--	--	--	--
Ontario	292	363	418	407	21	27	34	38
Saskatchewan	1 379	1 283	1 265	1 294	22	21	23	31
Alberta	69 208	64 789	64 306	65 292	4,419	5,749	5,994	6,659
British Columbia	10 225	8 114	7 512	6 641	349	304	332	337
Yukon and Northwest Territories	584	381	322	146	44	46	37	16
<b>Total</b>	<b>81 691</b>	<b>74 932</b>	<b>73 824</b>	<b>73 782</b>	<b>4,855</b>	<b>6,147</b>	<b>6,421</b>	<b>7,081</b>

<sup>1</sup>Net production, after field flare and use, reinjection and shrinkage.**11.7 Natural gas supply and demand (million cubic metres)**

Item	1979	1980	1981	1982
<b>Supply</b>				
Net production	81 721	74 932	73 824	77 782
Marketable gas <sup>1</sup>	75 345	68 765	67 858	69 288
Imports	3	3	4	3
Interproduct transfers <sup>2</sup>	246	278	240	235
<b>Total, supply</b>	<b>75 594</b>	<b>69 046</b>	<b>68 102</b>	<b>69 526</b>

**11.7 Natural gas supply and demand (million cubic metres) (concluded)**

Item	1979	1980	1981	1982
<b>Demand</b>				
Domestic demand	46 803	46 122	45 231	46 157
Industrial	18 632	18 448	17 368	16 029
Transportation	2 440	2 042	2 139	1 959
Residential and farm	11 161	11 465	11 570	12 996
Public administration	418	438	461	520
Commercial and institutional	8 938	8 509	9 101	10 022
Electrical generation	2 796	2 255	1 844	1 639
Non-energy use <sup>3</sup>	2 418	2 965	2 748	2 992
Export	28 059	22 972	21 696	22 081
<b>Total, demand</b>	<b>74 862</b>	<b>69 094</b>	<b>66 927</b>	<b>68 238</b>
Inventory change and other adjustments	732	- 84	1 175	1 288

<sup>1</sup>After field and plant use/loss and processing shrinkage.<sup>2</sup>Transfer of one product to another product stream which has similar characteristics.<sup>3</sup>Petrochemical feedstock.**11.8 Natural gas liquids production and value**

Item	Gas plant production <sup>1</sup> ('000 m <sup>3</sup> )				Value (\$'000,000)			
	1979	1980	1981	1982	1979	1980	1981	1982
<b>Propane</b>	<b>5 704</b>	<b>5 402</b>	<b>5 253</b>	<b>5 329</b>	<b>325</b>	<b>459</b>	<b>515</b>	<b>463</b>
Saskatchewan	76	67	34	58	5	4	3	7
Alberta	5 542	5 260	5 155	5 202	315	450	507	452
British Columbia	85	76	64	69	5	5	4	4
<b>Butane</b>	<b>3 621</b>	<b>3 366</b>	<b>3 151</b>	<b>3 223</b>	<b>318</b>	<b>424</b>	<b>440</b>	<b>497</b>
Saskatchewan	37	31	18	18	5	4	2	3
Alberta	3 472	3 245	3 048	3 116	304	413	430	485
British Columbia	113	90	85	89	10	8	9	9
<b>Ethane</b>	<b>3 631</b>	<b>4 356</b>	<b>4 700</b>	<b>4 248</b>	<b>242</b>	<b>343</b>	<b>447</b>	<b>..</b>
Alberta	3 631	4 356	4 700	4 248	242	343	447	..
<b>Total</b>	<b>12 957</b>	<b>13 124</b>	<b>13 104</b>	<b>12 800</b>	<b>887</b>	<b>1,227</b>	<b>1,405</b>	<b>..</b>
Saskatchewan	113	98	52	76	10	8	5	10
Alberta	12 645	12 861	12 903	12 566	862	1,206	1,384	..
British Columbia	198	166	149	158	14	13	14	13

<sup>1</sup>Net production.**11.9 Natural gas liquids (thousand cubic metres)**

Item	1979	1980	1981	1982
<b>Supply</b>				
Gas plant production	12 957	13 124	13 104	12 800
Interproduct transfers	575	411	1 392	1 392
Butane to refineries for blending	- 876	- 891	- 906	943
Propane and butane received from refineries <sup>1</sup>	1 451	1 302	2 298	2 335
<b>Total, supply</b>	<b>13 532</b>	<b>13 535</b>	<b>14 496</b>	<b>14 192</b>
<b>Demand</b>				

### 11.9 Natural gas liquids (thousand cubic metres) (concluded)

Item	1979	1980	1981	1982
Domestic energy demand	2 421	2 444	2 365	2 728
Non-energy use <sup>2</sup>	991	1 592	2 234	1 394
Exports	9 780	9 176	8 907	9 783
Total, demand	13 192	13 212	13 506	13 905
Inventory change and other adjustments	340	324	990	287

<sup>1</sup>Petroleum refinery produced propane and butane for sale or export.

<sup>2</sup>Excludes any propane or butane which became part of the petrochemical feedstocks in petroleum refineries.

### 11.10 Coal production and value, by type and province

Type and province	Production ('000 t)				Value (\$'000,000)			
	1979	1980	1981	1982 <sup>c</sup>	1979	1980	1981	1982 <sup>c</sup>
Bituminous	18 612	20 173	21 739	22 296	790	841	937	1,135
Nova Scotia	2 157	2 726	2 539	3 051	100	133	128	170
New Brunswick	310	439	524	499	10	17	22	25
Alberta	5 529	6 852	6 895	6 978	192	246	246	305
British Columbia	10 616	10 156	11 781	11 768	488	445	541	635
Sub-bituminous	9 575	10 544	11 551	13 021	46	56	79	88
Alberta	9 575	10 544	11 551	13 021	46	56	79	88
Lignite	5 013	5 971	6 798	7 494	24	34	56	76
Saskatchewan	5 013	5 971	6 798	7 494	24	34	56	76
Total	33 200	36 688	40 088	42 811	860	931	1,073	1,298

### 11.11 Coal, supply and demand (thousand tonnes)

Item	1979	1980	1981	1982
Supply				
Production	33 200	36 688	40 088	42 811
Imports	17 345	15 634	14 967	15 673
Total, supply	50 545	52 322	55 055	58 484
Demand				
Domestic demand	35 027	37 317	38 506	41 515
Electrical generation	25 029	27 781	29 924	33 728
Coke plants	7 903	7 306	6 455	5 578
Steam generation	336	371	245	317
Manufacturing	1 510	1 627	1 643	1 632
Residential	191	150	165	179
Public administration	13	11	9	20
Commercial and institutional	45	53	48	51
Non-energy use	..	18	17	10
Exports	13 658	15 280	15 843	16 004
Total, demand	48 685	52 597	54 349	57 519
Inventory change and other adjustments	1 860	- 275	706	966

## 11.12 Electricity generated and consumed, by province (thousand megawatt hours)

Province or territory	Generation				Domestic demand			
	1979	1980	1981	1982	1979	1980	1981	1982
Newfoundland	43 644	46 374	44 767	44 338	7 186	7 379	7 869	7 576
Prince Edward Island	151	127	31	35	454	456	456	450
Nova Scotia	6 179	6 868	6 577	6 576	6 198	6 427	6 237	6 062
New Brunswick	9 218	9 323	8 994	8 455	7 378	7 876	7 966	7 556
Quebec	89 043	97 917	103 175	100 021	98 226	106 107	111 129	108 381
Ontario	109 234	110 284	110 978	110 407	96 981	98 133	100 781	98 732
Manitoba	20 626	19 468	18 384	20 789	11 866	11 781	11 380	11 771
Saskatchewan	9 118	9 204	9 683	9 851	8 375	8 521	8 899	8 919
Alberta	21 669	23 451	25 570	27 112	19 660	21 056	23 446	25 319
British Columbia	43 327	43 416	51 087	48 180	37 210	38 977	38 911	39 462
Yukon and Northwest Territories	843	875	887	841	719	796	807	786
Total	353 051	367 306	380 132	376 605	295 253	307 509	317 881	315 014

## 11.13 Electricity supply and demand (thousand megawatt hours)

Item	1979	1980	1981	1982
Supply				
Production				
Hydro	353 054	366 876	380 132	376 605
Nuclear	243 041	250 572	263 394	258 470
Thermal	33 275	35 980	37 799	33 010
Thermal	76 738	80 324	78 938	85 125
Imports	1 792	2 939	1 496	2 849
Total, supply	354 846	369 816	381 628	379 454
Demand				
Domestic demand	294 252	307 509	317 881	315 014
Manufacturing	113 301	119 355	123 750	116 075
Other industrial	19 116	20 616	21 791	20 146
Transportation	2 285	2 284	2 123	2 140
Agriculture	7 424	7 844	7 840	8 394
Residential	80 194	84 825	87 245	90 878
Public administration	10 164	9 144	9 119	9 449
Commercial and institutional	61 768	63 386	66 014	67 933
Exports	31 378	30 185	35 372	34 214
Total, demand	325 630	337 694	353 253	349 228
Own use, transmission losses and other adjustments	29 168	32 242	28 375	30 226

11.14 Fuels used to generate thermal electricity<sup>1</sup> by province

Province or territory	Year	Coal ( <sup>1</sup> 000 t)	Natural gas ( <sup>1</sup> 000 m <sup>3</sup> )	Petroleum products (ML)	Uranium (tonnes)	Other <sup>2</sup> (MJ)
Newfoundland	1979	—	—	391	—	—
	1980	—	—	398	—	—
	1981	—	—	158	—	—
	1982	—	—	80	—	—
Prince Edward Island	1979	—	—	63	—	—
	1980	—	—	54	—	—
	1981	—	—	18	—	—
	1982	—	—	19	—	—
Nova Scotia	1979	580	—	887	—	842
	1980	1 057	—	780	—	913
	1981	1 126	—	613	—	803
	1982	1 300	—	552	—	512
New Brunswick	1979	218	—	1 367	—	138
	1980	315	—	1 456	—	138
	1981	515	—	952	—	1 881
	1982	548	—	1 006	5	1 771
Quebec	1979	—	2	162	—	171
	1980	—	2	158	—	160
	1981	—	—	74	—	275
	1982	—	—	105	—	110

### 11.14 Fuels used to generate thermal electricity<sup>1</sup> by province (concluded)

Province or territory	Year	Coal ( <sup>1</sup> 000 t)	Natural gas ( <sup>1</sup> 000 m <sup>3</sup> )	Petroleum products (ML)	Uranium (tonnes)	Other <sup>2</sup> (MJ)
Ontario	1979	10 747	756	288	658	1 155
	1980	10 811	437	74	685	1 535
	1981	11 496	320	117	672	1 051
	1982	12 490	270	172	633	841
Manitoba	1979	78	1	28	—	—
	1980	220	1	30	—	—
	1981	321	1	22	—	176
	1982	184	7	22	—	149
Saskatchewan	1979	5 464	229	9	—	176
	1980	4 972	252	18	—	204
	1981	5 036	186	30	—	215
	1982	5 897	235	38	—	137
Alberta	1979	10 326	1 508	5	—	2 255
	1980	10 410	1 548	5	—	2 464
	1981	11 444	1 422	6	—	4 224
	1982	13 309	1 065	7	—	5 115
British Columbia	1979	—	204	111	—	5 132
	1980	—	251	110	—	5 154
	1981	—	58	92	—	5 478
	1982	—	62	100	—	6 545
Yukon and Northwest Territories	1979	—	—	81	—	—
	1980	—	—	83	—	—
	1981	—	—	105	—	—
	1982	—	—	92	—	—
Canada	1979	27 413	2 699	3 390	658	9 869
	1980	27 785	2 490	3 166	685	10 565
	1981	29 938	1 987	2 183	672	14 103
	1982	33 728	1 639	2 190	637	15 180

<sup>1</sup>For utilities, industrial and other producers of thermal electricity.

<sup>2</sup>Includes some petroleum products (tar, coke), manufactured gases, wood, spent pulping liquor and other miscellaneous fuels measured in estimated megajoules.

### 11.15 Electric energy generation<sup>1</sup> by method and province (thousand megawatt hours)

Province or territory	Year	Thermal					Hydro	Nuclear	Total
		Coal	Natural gas	Petroleum	Other	Total			
Newfoundland	1979	—	—	1 415	—	1 415	42 229	—	43 644
	1980	—	—	1 501	—	1 501	44 873	—	46 374
	1981	—	—	550	—	551	44 217	—	44 768
	1982	—	—	1 242	—	1 242	43 096	—	44 338
Prince Edward Island	1979	—	—	151	—	151	—	—	151
	1980	—	—	127	—	127	—	—	127
	1981	—	—	31	—	31	—	—	31
	1982	—	—	35	—	35	—	—	35
Nova Scotia	1979	1 200	—	3 651	153	5 003	1 176	—	6 179
	1980	2 540	—	3 259	166	5 965	903	—	6 868
	1981	2 640	—	2 625	146	5 411	1 166	—	6 577
	1982	2 790	—	2 667	93	5 551	1 025	—	6 576
New Brunswick	1979	410	—	5 647	25	6 082	3 136	—	9 218
	1980	689	—	5 920	25	6 633	2 690	—	9 323
	1981	1 145	—	3 642	342	5 129	3 866	—	8 995
	1982	1 275	—	3 939	322	5 536	2 645	274	8 455
Quebec	1979	—	10	488	31	529	88 514	—	89 043
	1980	—	10	250	29	289	97 628	—	97 917
	1981	—	—	178	50	228	102 946	—	103 174
	1982	—	—	190	20	210	99 811	—	100 021
Ontario	1979	28 460	3 862	1 123	210	33 654	42 308	—	109 234
	1980	30 823	2 795	217	279	34 114	40 307	33 272	110 284
	1981	32 027	2 363	394	191	34 974	38 204	35 863	110 284
	1982	34 274	2 084	385	153	36 897	40 775	32 736	110 408
Manitoba	1979	49	9	125	—	183	20 443	—	20 626
	1980	229	9	136	—	373	19 095	—	19 468
	1981	363	8	82	32	485	17 899	—	18 384
	1982	177	15	75	27	294	20 495	—	20 789
Saskatchewan	1979	5 874	764	34	32	6 703	2 415	—	9 118
	1980	5 778	799	42	37	6 655	2 549	—	9 204
	1981	5 806	630	104	39	6 580	3 102	—	9 682
	1982	6 640	731	95	25	7 491	2 360	—	9 851
Alberta	1979	15 182	4 648	9	410	20 254	1 415	—	21 669
	1980	16 464	4 820	20	448	21 752	1 699	—	23 451
	1981	17 797	4 942	27	768	23 533	2 035	—	25 568
	1982	19 474	5 087	31	930	25 522	1 590	—	27 112
British Columbia	1979	—	891	545	933	2 369	40 958	—	43 327
	1980	—	1 070	550	937	2 556	40 860	—	43 416
	1981	—	256	416	996	1 668	49 419	—	51 087
	1982	—	414	451	1 190	2 054	46 126	—	48 180

**11.15 Electric energy generation<sup>1</sup> by method and province (thousand megawatt hours) (concluded)**

Province or territory	Year	Thermal					Hydro	Nuclear	Total
		Coal	Natural gas	Petroleum	Other	Total			
Yukon and Northwest Territories	1979	—	—	244	—	244	599	—	843
	1980	—	—	261	—	261	614	—	875
	1981	—	—	345	—	346	540	—	886
	1982	—	—	294	—	294	547	—	841
Canada	1979	51 175	10 184	13 432	1 794	76 585	243 194	33 272	353 051
	1980	56 523	9 503	12 283	1 920	80 226	251 217	35 863	367 306
	1981	59 778	8 198	8 396	2 564	78 936	263 394	37 799	380 132
	1982	64 630	8 331	9 403	2 760	85 125	258 470	33 010	376 605

<sup>1</sup>For utilities and industry, total generation shown may be higher than net generation due to some station service included in this table.

**11.16 Wells drilled, by type and region<sup>1</sup>**

Region	1979	1980	1981	1982	1979	1980	1981	1982
	Oil				Gas			
Western Canada	2,310	2,791	2,074	2,502	3,450	4,241	3,206	2,555
Alberta	1,256	1,639	1,483	1,619	3,216	3,968	3,085	2,499
Saskatchewan	956	1,099	512	686	45	49	25	10
British Columbia	80	31	27	25	187	219	95	42
Manitoba	16	18	47	163	—	—	—	—
Yukon and Northwest Territories	2	4	5	10	2	5	1	4
Eastern Canada	7	14	10	28	84	92	79	63
Ontario	6	12	6	27	83	91	76	61
Quebec	—	—	—	—	—	—	1	—
Atlantic provinces	—	—	—	—	—	—	—	—
East Coast offshore	1	2	4	1	1	1	2	2
Total	2,317	2,805	2,084	2,531	3,534	4,333	3,285	2,618
	Dry				Total			
Western Canada	1,649	1,805	1,598	1,206	7,409	8,837	6,878	6,264
Alberta	1,263	1,365	1,246	1,029	5,735	6,972	5,814	5,147
Saskatchewan	232	295	247	103	1,233	1,443	784	799
British Columbia	128	129	83	37	395	379	205	104
Manitoba	9	9	15	31	25	27	62	194
Yukon and Northwest Territories	17	7	7	6	21	16	13	20
Eastern Canada	134	127	102	72	225	233	191	163
Ontario	120	119	94	67	209	222	176	155
Quebec	7	2	4	—	7	2	5	—
Atlantic provinces	3	—	1	1	3	—	1	1
East Coast offshore	4	6	3	4	6	9	9	7
Total	1,783	1,932	1,700	1,278	7,634	9,070	7,069	6,427

<sup>1</sup>Does not include suspended or service and miscellaneous wells.

**11.17 Natural gas and oil pipelines distances in Canada (kilometres)**

Item and province	1979	1980	1981
Natural gas			
Gathering and transmission systems	67 398	69 778	72 793
New Brunswick	42	42	42
Quebec	256	256	276
Ontario	11 377	11 547	11 690
Manitoba	2 807	2 675	2 791
Saskatchewan	12 567	12 637	12 850
Alberta	32 355	34 198	36 683
British Columbia	7 939	8 368	8 406
Yukon and Northwest Territories	55	55	55

**11.17 Natural gas and oil pipelines distances in Canada (kilometres) (concluded)**

Item and province	1979	1980	1981
Distribution systems	81 161	85 512	88 862
New Brunswick	146	146	146
Quebec	2 999	3 029	3 071
Ontario	30 478	31 837	32 974
Manitoba	2 977	3 049	3 068
Saskatchewan	5 421	5 592	5 785
Alberta	28 951	31 092	32 567
British Columbia	10 189	10 767	11 250
Crude oil and products <sup>1</sup>			
Gathering and transmission systems	34 868	35 663	36 366
Quebec	699	699	699
Ontario	3 461	3 382	3 581
Manitoba	2 026	2 027	2 024
Saskatchewan	8 380	8 341	8 310
Alberta	17 568	18 457	18 976
British Columbia	2 645	2 668	2 687
Yukon and Northwest Territories	89	89	89

<sup>1</sup>Includes various refined petroleum products as well as natural gas liquids.

**11.18 Oil refining, by province**

Province or territory	Year	Existing refineries			New refineries planned or under construction	
		No.	Capacity '000 m <sup>3</sup> /yr	% of total	Capacity '000 m <sup>3</sup> /yr	Scheduled for completion
Newfoundland	1979	1	803	0.6	—	—
	1980	1	876	0.7	—	—
	1981	1	876	0.7	—	—
	1982	1	876	0.7	—	—
Nova Scotia	1979	3	10 731	7.8	—	—
	1980	2	5 913	4.5	—	—
	1981	2	5 913	4.6	—	—
	1982	2	5 913	4.7	—	—
New Brunswick	1979	1	14 490	10.6	—	—
	1980	1	14 490	11.0	—	—
	1981	1	13 797	10.6	—	—
	1982	1	13 797	10.8	—	—
Quebec	1979	7	35 807	26.2	—	—
	1980	7	35 916	27.2	—	—
	1981	7	34 237	26.3	—	—
	1982	6	29 894	23.5	—	—
Ontario	1979	8	43 982	32.1	—	—
	1980	8	43 982	33.3	—	—
	1981	8	43 836	33.7	—	—
	1982	8	43 836	34.4	—	—
Manitoba	1979	1	1 752	1.3	—	—
	1980	1	1 752	1.3	—	—
	1981	1	1 752	1.3	—	—
	1982	1	1 752	1.4	—	—
Saskatchewan	1979	2	3 102	2.3	—	—
	1980	2	2 847	2.2	—	—
	1981	2	2 847	2.2	—	—
	1982	2	2 847	2.2	—	—
Alberta	1979	6	16 279	11.9	1 168	1982
	1980	6	16 316	12.3	4 052	1982, 1984
	1981	6	16 571	12.8	4 380	1982, 1984
	1982	7	18 177	14.3	2 920	1984
British Columbia	1979	7	9 782	7.1	—	—
	1980	7	9 782	7.4	—	—
	1981	7	10 038	7.7	—	—
	1982	7	10 038	7.9	—	—
Northwest Territories	1979	1	182	0.1	—	—
	1980	1	182	0.1	—	—
	1981	1	182	0.1	—	—
	1982	1	182	0.1	—	—
Total	1979	38	136 912	100.0	1 168	1982
	1980	36	132 057	100.0	4 052	1982, 1984
	1981	36	130 050	100.0	4 380	1982, 1984
	1982	36	127 312	100.0	2 920	1984

**11.19 Installed generating capacity<sup>1</sup> (megawatts)**

Province or territory	Year	Conventional steam	Gas turbine	Internal combustion	Hydro	Nuclear	Total
Newfoundland	1979	503	170	71	6 369	—	7 113
	1980	503	170	77	6 444	—	7 195
	1981	503	170	75	6 210	—	6 959
	1982	503	170	79	6 210	—	6 963
Prince Edward Island	1979	71	41	7	—	—	118
	1980	71	41	7	—	—	118
	1981	71	41	7	—	—	118
	1982	71	41	7	—	—	118
Nova Scotia	1979	1 319	205	1	360	—	1 885
	1980	1 463	205	1	360	—	2 029
	1981	1 463	205	1	360	—	2 029
	1982	1 298	205	1	361	—	1 865
New Brunswick	1979	1 864	23	5	793	—	2 685
	1980	1 866	23	5	901	—	2 795
	1981	1 863	23	5	901	—	2 792
	1982	1 860	23	5	901	680	3 469
Quebec	1979	655	313	147	16 764	266	18 145
	1980	655	363	156	19 091	266	20 531
	1981	649	363	145	20 768	266	22 191
	1982	640	363	142	21 351	266	22 762
Ontario	1979	12 572	451	10	7 086	5 600	25 718
	1980	12 590	451	10	7 145	5 600	25 796
	1981	12 732	338	10	7 072	5 600	25 752
	1982	12 872	659	10	7 131	5 600	26 272
Manitoba	1979	447	24	29	3 641	—	4 141
	1980	447	24	30	3 641	—	4 142
	1981	447	24	31	3 641	—	4 143
	1982	447	24	32	3 641	—	4 144
Saskatchewan	1979	1 335	104	17	577	—	2 033
	1980	1 639	104	19	579	—	2 340
	1981	1 659	104	18	576	—	2 356
	1982	1 624	104	18	576	—	2 322
Alberta	1979	4 323	345	39	718	—	5 425
	1980	4 723	325	41	718	—	5 807
	1981	5 098	327	42	734	—	6 201
	1982	5 125	524	44	734	—	6 427
British Columbia	1979	1 279	355	137	7 590	—	9 362
	1980	1 258	342	140	8 785	—	10 525
	1981	1 283	339	141	9 000	—	10 762
	1982	1 426	339	123	8 998	—	10 886
Yukon	1979	—	—	36	58	—	94
	1980	—	—	36	58	—	94
	1981	—	—	37	58	—	95
	1982	—	—	40	58	—	98
Northwest Territories	1979	1	—	129	47	—	177
	1980	1	—	132	47	—	180
	1981	1	—	130	47	—	178
	1982	1	—	138	47	—	186
Confidential	1979	91	198	38	4	—	331
	1980	58	389	—	—	—	446
	1981	56	380	—	—	—	436
	1982	35	—	1	—	—	36
Canada	1979	24 460	2 228	665	44 009	5 866	77 227
	1980	25 274	2 436	653	47 770	5 866	81 999
	1981	25 825	2 314	640	49 367	5 866	84 012
	1982	25 900	2 453	640	50 007	6 546	85 547
Net additions	1979	365	228	17	2 111	—	2 720
	1980	814	208	-12	3 761	—	4 772
	1981	551	122	-13	1 597	—	2 013
	1982	75	139	—	640	680	1 535
1979 % increase over	1978	1.5	11.4	2.6	5.0	—	-3.7
1980 % increase over	1979	3.3	9.3	-1.8	8.5	—	6.1
1981 % increase over	1980	2.2	-5.0	-2.0	3.3	—	2.5
1982 % increase over	1981	0.3	5.7	—	1.3	11.6	1.8

<sup>1</sup>Name plate rating; rating of generator under specified conditions as designed by the manufacturer.

**11.20 Capital expenditures in energy-related industries (million dollars)**

Item	1979	1980	1981	1982 <sup>1</sup>	1983 <sup>2</sup>
Industries related to petroleum and natural gas	5,215	7,772	10,295	10,565	9,898
Conventional crude oil and natural gas	3,641	5,324	5,904	5,643	6,293
Non-conventional crude oil	245	421	541	379	510
Refined petroleum and coal products	274	325	845	1,114	792
Natural gas processing plants	302	312	312	504	374
Transportation	229	602	1,746	2,021	871
Natural gas distribution	263	386	409	516	553
Marketing	134	205	264	270	364
Oil and gas drilling contractors	128	198	275	118	142
Electric power systems	6,364	6,109	7,319	8,562	9,258
Coal mines	214	299	576	1,083	1,109
Uranium	243	277	289	347	343
<b>Total</b>	<b>12,036</b>	<b>14,458</b>	<b>18,479</b>	<b>20,556</b>	<b>20,609</b>

<sup>1</sup>Preliminary actual expenditures.<sup>2</sup>Intentions.**11.21 Estimated federal energy R&D expenditures (million dollars)<sup>1</sup>**

Item	1981-82	1982-83	1983-84
Conservation	16	34	40
Fossil fuels <sup>2</sup>	12	22	28
Nuclear <sup>3</sup>	90	116	130
Renewable <sup>4</sup>	25	33	40
New liquid fuels <sup>5</sup>	25	38	41
Oil, gas, electricity <sup>6</sup>	10	30	51
Co-ordination	2	2	2
<b>Total</b>	<b>180</b>	<b>275</b>	<b>332</b>

<sup>1</sup>Exclusive of federal-provincial demonstration and research agreements, related scientific activities, and grants programs.<sup>2</sup>Includes oil sands, heavy oil, coal supply and combustion, and related environmental issues.<sup>3</sup>Includes nuclear fission and fusion, Atomic Energy of Canada expenditures 1981-84 are derived from MOSST Federal science expenditures and personnel, 1983-84 June 1983, Table 62. Growth largely reflects expansion of fusion, radioactive waste management and safety program.<sup>4</sup>Includes hydraulic, solar, biomass, wind, geothermal and peat energy sources.<sup>5</sup>Includes hydrogen, alcohols, and synthetic transportation fuels.<sup>6</sup>Includes conventional and frontier oil and gas, and electrical R&D.**Sources**

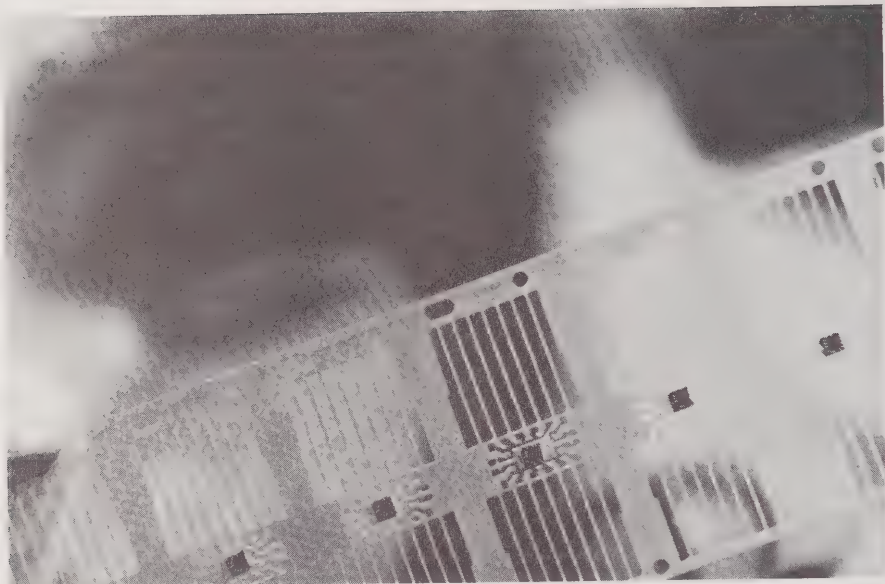
11.1 - 11.20 Energy and Minerals Section, Manufacturing and Primary Industries Division, Statistics Canada.

11.21 Energy Policy Co-ordination Branch, Department of Energy, Mines and Resources.

CHAPTER 12

---

# SCIENCE AND TECHNOLOGY



## OVERVIEW

---

More than 60 federal departments and agencies spent an estimated \$4 billion on science and technology (S&T) in 1984-85. About 35,000 persons were engaged in the government's S&T activities.

The National Research Council (NRC) had a budget of \$525 million. As the federal government's largest and most diversified research organization, it was the biggest spender on natural sciences and engineering activities.

Newsmakers among events related to the NRC space activities: Canadarm, a remote manipulating arm designed by NRC, guided the Solar Max satellite into the cargo bay of the space shuttle Challenger in April 1984 for an orbital overhaul; and the first Canadian astronaut in space, Dr. Marc Garneau, participated in a mission of the Challenger in October 1984, conducting Canadian-designed experiments.

Statistics Canada, with an estimated budget of \$250 million, led in expenditures on the social sciences and humanities. As the statistical agency of the federal government, it collects and provides information needed for understanding the Canadian economy and institutions.

## CHAPTER 12

---

# SCIENCE AND TECHNOLOGY

<b>12.1</b>	<b>Federal resources for science and technology</b>	<b>391</b>
12.1.1	Natural sciences and engineering	391
12.1.2	Social sciences and humanities	391
<b>12.2</b>	<b>Major participants in natural sciences and engineering</b>	<b>392</b>
12.2.1	National Research Council	392
12.2.2	Environment Canada	392
12.2.3	Energy, Mines and Resources Canada	393
12.2.4	Natural Sciences and Engineering Research Council	393
12.2.5	Agriculture Canada	393
<b>12.3</b>	<b>Major participants in social sciences and humanities</b>	<b>393</b>
12.3.1	Statistics Canada	393
12.3.2	Social Sciences and Humanities Research Council	393
12.3.3	National Museums Corp.	394
12.3.4	National Library of Canada	394
12.3.5	International Development Research Centre	394
<b>12.4</b>	<b>Application areas of federal funding</b>	<b>394</b>
<b>12.5</b>	<b>Federal support to industry</b>	<b>394</b>
<b>12.6</b>	<b>Federal support to universities</b>	<b>396</b>
<b>12.7</b>	<b>Provincial research organizations</b>	<b>396</b>
<b>12.8</b>	<b>National expenditures on R&amp;D</b>	<b>397</b>

## **TABLES**

12.1	Federal expenditures, natural sciences	398
12.2	Federal expenditures, social sciences	398
12.3	Natural sciences, R&D and RSA	399
12.4	Federal spending on social sciences R&D and RSA	399
12.5	Federal expenditures by application area	400
12.6	Federal employees, natural sciences	402
12.7	Federal employees, social sciences	403
12.8, 12.9	Expenditures of provincial research organizations	403

## **CHART**

Chart 12.1	Federal scientific expenditures	395
------------	---------------------------------	-----

## SCIENCE AND TECHNOLOGY

Science and technology (S&T) is a term used to encompass activities which involve the generation, dissemination and initial application of new scientific knowledge and technology. In Canada S&T is used to foster the development of natural resources, to aid industry, and to stimulate economic growth both nationally and regionally. The federal and provincial governments, industry and universities fund and perform S&T.

Science and technological activities are undertaken in the natural sciences and engineering (NSE) and in the social sciences and humanities (SSH). In both of these fields of science two types of scientific endeavour are undertaken: research and development (R&D) which is creative work undertaken on a systematic basis to increase the stock of knowledge, and related scientific activities (RSA) which are activities that complement and extend R&D by contributing to the generation, dissemination and application of scientific and technological knowledge.

In this chapter the primary focus is on the federal resources devoted to S&T including federal support to industrial development, basic research and the development of highly skilled people through the university sector. The final section describes briefly the national effort on R&D in the natural sciences and engineering including contributions by the governments, industry and universities.

The bulk (31%) of the federal government's expenditures is in the national capital region (NCR), 22% in Ontario (excluding Ottawa), 14% in Quebec (excluding Hull), 10% in the Atlantic provinces and the remaining 23% in the western provinces.

### 12.1 Federal resources for science and technology

Total expenditures for S&T were estimated at about \$4 billion in 1984-85, having doubled since 1979-80 and with an 11.5% increase since 1983-84. Over 60 federal departments and agencies spend funds for S&T to support departmental missions and to aid industrial development through both in-house (intramural) activities and by funding S&T to be performed by the private sector (extramural). Basic research in the university sector is funded by the government primarily through three granting

councils: the Natural Sciences and Engineering Research Council, the Medical Research Council and the Social Sciences and Humanities Research Council.

About 35,000 persons were engaged in performing the government's S&T activities in 1984-85, essentially unchanged from the previous year but about a 5% growth since 1979-80. The largest employers were Environment Canada, Statistics Canada, Agriculture Canada and the National Research Council.

#### 12.1.1 Natural sciences and engineering

In the natural sciences such as biology, chemistry, physics, astronomy and geology and in engineering, estimated expenditures were \$3.2 billion in 1984-85, with \$2.4 billion (75%) for R&D and \$0.8 billion (25%) for RSA. Most of the RSA expenditures (\$364 million) was for data collection related to oceanographic and hydrographic needs and for environmental baseline studies.

About 55% of R&D expenditures were for intramural activities, 21% for R&D performed by industry and 19% for R&D performed by the university sector. The remaining expenditures were for R&D by private non-profit organizations, provincial and municipal governments, the foreign sector and other Canadian performers.

Since 1979-80 total expenditures in natural sciences and engineering have increased by 107% with R&D exhibiting the highest growth of 115% compared to RSA with a total growth of only 85%.

Human resources for R&D in the natural sciences and engineering totalled 16,508 person-years and RSA, 7,567 not including personnel engaged in administration.

Further details of the five largest participants are provided in section 12.2.

#### 12.1.2 Social sciences and humanities

The social sciences and humanities embrace all disciplines involved in studying human actions and conditions and the social, economic and institutional mechanisms affecting humans. Estimated 1984-85 expenditures in this field of science were \$771 million with 82% for RSA and 18% for R&D.

The bulk of the RSA expenditures was planned for data collection, dominated by the statistical activities

of Statistics Canada. About 86% of the expenditures on RSA are performed intramurally. In R&D, 42% of the expenditures are intramural with 31% being spent in the university sector, primarily as a result of the activities of the Social Sciences and Humanities Research Council.

Expenditures on social sciences and humanities show a much slower growth than those in natural sciences and engineering. Since 1979-80 expenditures in social sciences and humanities have grown by only 56%, RSA having had a growth rate of 86% and R&D 53%.

Human resources devoted to S&T were 8,701 person-years for RSA and 693 for R&D.

Further details for the five largest participants are provided in section 12.3.

## 12.2 Major participants in natural sciences and engineering

Five federal departments and agencies fund 58% of the total activities in natural sciences and engineering. The scientific and technological endeavours of these departments and agencies cover a broad range of activities including in-house facilities for industry research, support for industrial development, support for basic research and training of scientific personnel, and performing of research in support of departmental missions.

### 12.2.1 National Research Council

Created in 1917, the National Research Council (NRC) has an objective to create, acquire and promote the application of scientific and engineering knowledge to meet Canadian needs for economic, regional and social development. With estimated expenditures of \$525 million in 1984-85 it is the largest federal spender on S&T activities. The total overall growth of NRC expenditures has been about 160% since 1979-80 with a 20% increase in 1984-85 over 1983-84. NRC was spending about 67% of its 1984-85 budget intramurally, 25% in the industrial sector, 6% in the university sector and the balance among other performers.

NRC covers a wide range of scientific and technological activities in two programs: scientific and industrial research and scientific and technical information.

**Scientific and industrial research.** This program includes five activities: national competence in the natural sciences and engineering, research on problems of economic and social importance, research in direct support of industrial innovation and development, national facilities, and research and services related to physical standards. The research laboratories are contained in the divisions of biological sciences, building research, chemistry, electrical engineering, energy, mechanical engineering and physics, and in the Canada Centre for Space

Science, the Herzberg Institute of Astrophysics and the National Aeronautical Establishment.

NRC also operates a series of regional laboratories:

- The Arctic Vessel and Marine Research Institute at St. John's, Nfld.,
- The Atlantic Research Laboratory at Halifax, NS,
- The Industrial Materials Research Institute in Boucherville, Que.,
- The Plant Biotechnology Institute (formerly the Prairie Regional Laboratory) in Saskatoon, Sask.,
- The Western Laboratory in Vancouver, BC,
- The Biotechnology Institute in Montréal, Que.

In addition to its laboratory facilities which are used to perform research in support of NRC's mission, and under contract to the private sector, NRC operates an industry and development office. This office was expected to provide an estimated \$81 million in 1984-85 in grants and contributions to industry through two industrial support programs: an industrial research assistance program (IRAP) and a program of industry/laboratory projects (PILP).

IRAP provides a wide range of support by paying salaries for researchers for specific projects in small and medium-sized businesses, and by providing technical advice to firms. These services are delivered to industry by a series of regional offices across the country, some of them operated under contract by the provincial research organizations (see section 12.5). PILP is designed to assist companies in technology transfer from both government and university laboratories.

Under the scientific and technical information program, NRC operates the Canada Institute for Scientific and Technical Information (CISTI).

### 12.2.2 Environment Canada

The federal department of the environment (Environment Canada) is second to NRC with estimated spending of \$398 million for S&T in the natural sciences and engineering. Over 90% was being spent in its own laboratories with about one-third on R&D and two-thirds on RSA, primarily for data collection.

Environment Canada's activities occur in its five services: atmospheric environment, Canadian forestry, environmental conservation, environmental protection and Parks Canada. Environment Canada operates a series of laboratories across the country to cope with both regional and national environmental concerns. The forestry service operates eight regional laboratories. The inland waters directorate and the National Water Research Institute are in Burlington, Ont. and the National Hydrology Institute in Saskatoon, Sask.

The atmospheric environment service was responsible for about 50% of the department's S&T expenditures. It provides historical, current and predictive meteorological, sea-state and ice information for all areas of Canada and contiguous waters.

The service provides assessments of human activities in the atmospheric environment and conducts research on the behaviour of the atmosphere, wind-wave mechanisms and the dynamics of ice.

About 23% of Environment Canada's funding for S&T was budgeted for environmental conservation which includes water resources development; water quantity and quality research; hydrometric data collection and the development of inventories of land capability and use.

Research in the forestry service took about 16% of the S&T budget on preservation, enhancement and wise use of forest resources; and on all aspects of forestry and assessing the potential of forests for energy, chemical and new products.

### 12.2.3 Energy, Mines and Resources Canada

The federal department of energy, mines and resources (EMR Canada) planned to spend about \$377 million on its S&T activities in 1984-85, 62% intramurally and 26% in the industrial sector. EMR operates several laboratories across Canada including an Atlantic geoscience centre in Nova Scotia and a Pacific geoscience centre in British Columbia; a Canada centre for mineral and energy technology (CANMET), a Canada centre for remote sensing and an earth physics branch in Ottawa; an institute for sedimentary and petroleum geology in Calgary; the Cordilleran geology division in Vancouver and coal research laboratories in Edmonton and Calgary, Alta. and Sydney, NS.

The department is responsible for geological surveys and the mapping of the Canadian landmass. The department also develops R&D policies to support national energy options, management and technical evaluation of the government's energy R&D program. See also Chapter 10, Mines and minerals, sub-section 10.9.1 *Research and technology*.

### 12.2.4 Natural Sciences and Engineering Research Council

The Natural Sciences and Engineering Research Council (NSERC) is the largest of the two university granting councils in natural sciences and engineering with planned expenditures of \$292 million in 1984-85. The second council is the Medical Research Council with expenditures of \$157 million. About 92% of NSERC's budget goes to Canadian universities and 2% to foreign performers with the bulk of the balance devoted to administration. NSERC has a small post-doctorate program in industry which amounted to \$4 million in 1984-85.

The council recently launched two new initiatives: the first involved spending \$16.5 million over three years to strengthen joint industry-university research and technology. The second involved spending \$7.5 million over two years to establish a nationwide network, university based and computer linked, of design and testing stations for very large integrated circuits. Responsibility for management of the

network was to be vested in a new organization, the Canadian Microelectronics Corp. funded by a block grant from NSERC.

### 12.2.5 Agriculture Canada

The federal department of agriculture (Agriculture Canada) with estimated spending of \$292 million is the fifth largest spender in natural sciences and engineering. The bulk of Agriculture Canada expenditures, 95%, was planned for R&D with 94% being performed intramurally. Only 3% of the department's expenditures were in the industry sector and 2% in the university sector.

The bulk of the department's S&T activities is in the research branch which operates 52 research units across Canada. These specialize in local problems. In addition Agriculture Canada operates six national research institutes: an animal research centre, a biosystematics research institute, a chemistry and biology research institute, a food research institute, a land resource research institute, and an engineering and statistical research institute.

S&T activities include research on soil properties; water use and water management; energy utilization; environmental quality research; research on production development including animal crossbreeding, feed lot systems and genetics; and research relating to processing distribution, retailing and consumer concerns.

## 12.3 Major participants in social sciences and humanities

Five federal departments and agencies fund 57% of the total expenditures in the social sciences and humanities. The scientific and technological endeavours cover a wide range of activities including collection and dissemination of information, funding of basic research in universities and research on third world social problems.

### 12.3.1 Statistics Canada

With estimated 1984-85 expenditures of \$250 million, Statistics Canada is by far the largest spender on social sciences and humanities (about four times that of the second largest spender). As the statistical agency of the federal government, Statistics Canada collects and provides statistical information needed for understanding the Canadian economy and Canadian institutions and for the development of economic and social policies and programs.

The four major technical fields in which the agency provides information are: national accounts; business and trade; institutions and labour; and informatics (the management of information processing) and methodology.

### 12.3.2 Social Sciences and Humanities Research Council

The estimated 1984-85 expenditures of the Social Sciences and Humanities Research Council (SSHRC)

were \$57 million with 65% to be spent on R&D in social sciences and humanities. Canadian universities receive about 80% of the council's budget.

The council objectives are: to encourage excellence in research, to enhance the advancement of knowledge by assisting independent research, to promote research which contributes to the fulfilment of national objectives, to encourage the diffusion of scholarly works, and to assist in the training of researchers. Grants are awarded to career scholars and for the international exchanges of scholars. Grants are also provided to learned societies to support scholarly publications and major editorial projects.

### 12.3.3 National Museums Corp.

National Museums planned to spend an estimated \$53 million on social sciences and humanities in 1984-85 to demonstrate the products of nature and the works of man. The bulk of this expenditure was slated for museum services but about 6% was to be spent on R&D in the social sciences and humanities. Expenditures on social sciences and humanities were set at 63% of the total budget with the balance to be spent on natural sciences and engineering activities. The corporation operates the National Gallery of Canada, the National Museum of Man, the National Museum of Natural Sciences, and the National Museum of Science and Technology.

The corporation operates a museum assistance program providing funds to non-profit organizations to develop museum services.

### 12.3.4 National Library of Canada

The National Library of Canada estimated 1984-85 expenditures at \$39 million, all for activities in the social sciences and humanities. Its objective is to facilitate the use of the library resources of the country by Canadians. The five units which comprise the library are the library systems centre, public services, cataloguing, collections, and conservation and technical services.

The national library operates an automated on-line library data-base management system called DOBIS. See also Chapter 15, Cultural activities and leisure, section 15.7 *Public archives and library services*.

### 12.3.5 International Development Research Centre

Estimated 1984-85 expenditures on social sciences and humanities for the International Development Research Centre (IDRC) were \$38 million which represents about 38% of its budget. The balance of the centre's expenditures was for natural sciences and engineering activities. Approximately one-third of its social sciences and humanities expenditures are for R&D making IDRC second only to SSHRC.

The centre's objective is to initiate, encourage, support and conduct research into the problems of the developing regions of the world and into applying knowledge to the economic and social advancement of these regions.

## 12.4 Application areas of federal funding

The government has adopted certain priority areas for S&T spending. Individual departments and agencies contribute to these priorities within the limits of their own mandates. Expenditures on application areas are detailed in Table 12.7.

The highest spending is for energy S&T, estimated at \$475 million for 1984-85. Activities include research on fossil fuels, renewable energy sources, nuclear sources, conservation and transportation. The department of energy, mines and resources (EMR Canada) is the largest spender followed by Atomic Energy of Canada and the National Research Council. NRC is responsible for several facets of the long-term research program including fusion, wind and solar energy sources.

Spending on advancement of knowledge estimated at \$431 million is the second highest, reflecting government concern for basic research and the training of highly qualified personnel. NSERC and NRC spend the largest amounts.

Estimated expenditures on food science at \$360 million form the third largest category. The departments of agriculture and fisheries and oceans, and NRC are the largest spenders.

Health science is another major concern with expenditures of \$286 million.

About \$266 million was to be spent on policy development S&T activities and about \$204 million on national security.

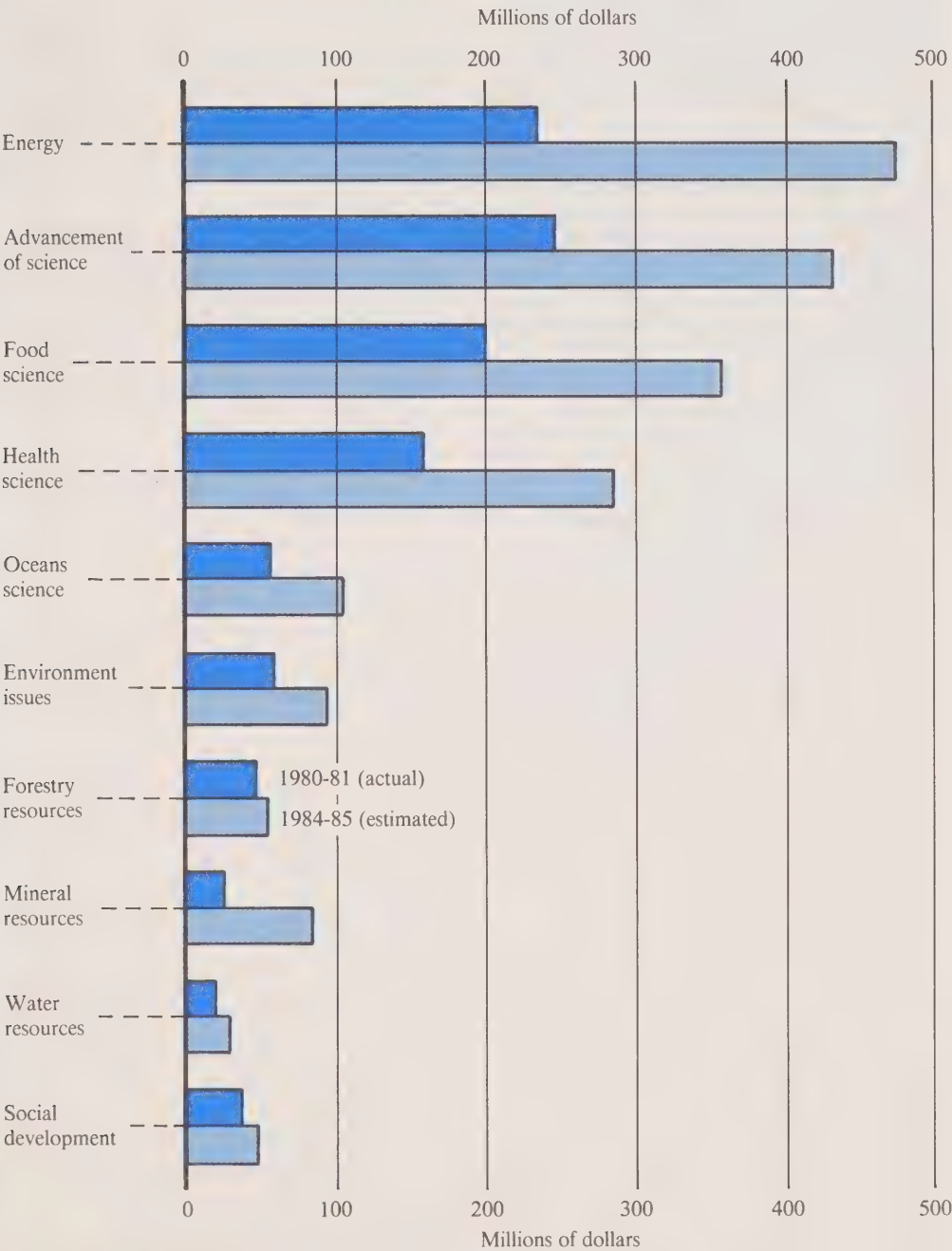
## 12.5 Federal support to industry

The government has a multi-faceted program for industrial development. This program includes direct payments to industry which take the form of contracting its S&T requirements and in supporting, through contributions, worthwhile projects required by industry. The government also aims to provide a favourable climate for the private sector through tax, tariff, trade and procurement policies. The government also assists industry by providing, on a cost-recovery basis, testing facilities maintained in government laboratories.

Government purchases of its R&D requirement were estimated at \$229 million for 1984-85 with the national defence department and NRC together accounting for 57% of the contracts.

Grants and contributions to industry were estimated at \$295 million for 1984-85. The department of regional industrial expansion (formerly the department of industry, trade and commerce) accounted for 49%. Its two major programs were a defence industry productivity program (DIPP) to assist high technology industry in the defence sector, and an industrial regional development program (IRDP) which came into effect in 1983 and subsumed among others an enterprise development program (EDP).

Chart 12.1  
Federal scientific expenditures, selected application areas, 1981 and 1985 <sup>(1)</sup>



(1) Fiscal years ending March 31.

NRC through its industrial research assistance program (IRAP) and the program of industry/laboratory projects (PILP) contributes \$81 million to industry. The latter program is designed to assist companies in technology transfer from both government and university laboratories.

Payments for R&D in the natural sciences and engineering had a concentration of 33% in Ontario (excluding Ottawa) and 28% in Quebec (excluding Hull).

## 12.6 Federal support to universities

Total payments to universities were estimated at \$588 million in 1984-85 with 86% in the natural sciences and engineering and 14% in the social sciences and humanities. Most of these payments (67%) were for R&D grants made by the three university granting councils: the Natural Sciences and Engineering Research Council (NSERC), the Medical Research Council and the Social Sciences and Humanities Research Council (SSHRC).

NSERC was the largest of these councils with a 1984-85 budget of \$292 million. Since 1979-80 NSERC experienced an average annual growth rate of 18%. Its program had five major components: manpower training, equipment, targeted research, discipline research and general programs. In 1984 NSERC created a national microelectronics network with about 30 centres in Canadian universities and an implementation centre at Queen's University in Kingston, Ont. as the focal point for the other centres.

The Medical Research Council budget was \$157 million for 1984-85 and the SSHRC budget was \$57 million. The department of national health and welfare provided funds for an \$18 million program for health research in universities. The department of the secretary of state was slated to spend \$25 million to fund a series of centres of specialization in Canadian universities.

The bulk of the funding was going to universities in Ontario (36%) and Quebec (23%).

## 12.7 Provincial research organizations

Eight provincial governments have established research councils or foundations with primary responsibilities to assist firms with technical problems. In 1983 total expenditures were estimated at \$113 million with about 1,800 people employed. Although relatively small in comparison with other organizations, their impact on industries in their respective provinces is substantial. In aggregate these organizations receive about 44% of their funds as a grant from their own provincial governments. About 20% of their expenditures is derived from contract research on behalf of industry.

**The Nova Scotia Research Foundation Corp.** is a Crown provincial agency with control vested in a

board of directors. Its 1983 expenditures were about \$5.4 million. The foundation performs research in fermentation and microbial technology; in chemical engineering including research on arsenic removal, methane removal, food, coal and corrosives; in ocean technology; and in marine and ground geophysics.

**The New Brunswick Research and Productivity Council**, created in 1962, had a 1983 budget of \$5.0 million. The council's research includes: pest control and pesticide residue, fuel oil and coal, ore processes, mineral smelting, bed combustion of fossil fuels, nuclear reactors, oil rigs, and effects of chemical additives in the food industry.

**The Centre de Recherche Industrielle du Québec**, created in 1969, had a 1983 budget of \$18.5 million. The centre operates research laboratories in both Québec City and Montréal. It works closely with small- and medium-sized businesses covering various aspects of applied sciences in the creation of new processes and products. It stresses advanced manufacturing techniques and is studying the applications of computer aided design and manufacturing (CAD/CAM) and robotics.

**The Ontario Research Foundation**, established in 1928 as an independent Crown corporation, had a 1983 budget of \$20.3 million. It performs research in energy conservation and solar systems, on long range transport of pollutants, waste treatment, building materials including fire and flammability studies, pulp and paper, microelectronics, mineral processing, hydrometallurgy and waste utilization. It operates a centre for alternate fuel utilization and a centre for powder metallurgy.

**The Manitoba Research Council** had a budget of \$5.3 million for 1983. The council operates a technical information service for industry, an industrial technology centre and the Canadian Food Products Development Centre. It performs research in the areas of plastics extrusion, fibreglass, atomic absorption spectroscopy, solid waste, wood stove testing, meat processing, and bacteria in milk products.

**The Saskatchewan Research Council** had a 1983 budget of \$9.5 million. The council performs research in biomass production and refining, farm energy use, sediments, ceramics, geochemistry, computer systems, computer-aided design and computer-aided manufacturing, and applied climatology. It operates a Canadian centre to design and develop innovative instruments.

**The Alberta Research Council**, created in 1921, had a 1983 budget of \$41.2 million making it the largest of the eight organizations with nearly double the expenditures of the next largest. The council performs research on the geology of Alberta oil-bearing sands, bitumen recovery, steam separation of hydrocarbons from sand, coal conversion,

groundwater, soil salinization, microbiology, and solar and wind energy. The council also operates an oil sands information branch.

**BC Research** is a non-profit industrial research society with offices and laboratories in Vancouver, BC. Its activities enable even the smallest firms to improve their competitive position in Canadian and world markets by the use of up-to-date scientific knowledge. It is active in applied biology, chemistry, engineering — physics, ocean engineering, operations research, industrial engineering — and social impact and economic studies.

## 12.8 National expenditures on R&D

The federal government adopted the ratio of gross expenditures on R&D (GERD) to the gross national product (GNP) as an indicator of the level of R&D in Canada. In January 1981 the government announced an R&D planning framework which called for the country's R&D to reach 1.5% of GNP by 1985. The

federal government share would be 0.5% of the GNP, while the target for industry would be 0.75% of the GNP with the balance funded by provincial governments, universities and other sources.

The ratio of GERD/GNP peaked at 1.29% in 1967 and declined until 1976 when it reached a value of 0.96%. The GERD/GNP ratio rose to a value of 1.29% again in 1982 but has subsequently declined to a projected value of 1.24% in 1984.

Preliminary data for 1984 indicated that Canada's gross expenditures on R&D would be about \$5.3 billion. Of this amount 38% was to be funded by the federal government, 40% by industry and the remaining 22% by the provincial governments, universities and other sources.

The R&D planning framework called for an average R&D growth rate of 20% with the federal government growth in expenditures to be 17% and the growth in industry to be 27% during the period 1979-85. Preliminary 1984 data reveal that the overall actual growth rate was only 15%, with a federal rate of 16% and industrial, 15%.

### Source

Science and Technology Division, Statistics Canada. Compiled by Dr. H.F. Waldron.

### Selected references

- Canadian science indicators*. Statistics Canada 88-201 (annual), Ottawa.
- Federal scientific activities, 1984/85*. Statistics Canada 88-204 (annual), Ottawa.
- A framework for measuring research and development expenditures in Canada*. Statistics Canada 88-506, Ottawa.
- Human resources for science and technology in Canada*. Statistics Canada 88-508, Ottawa.
- An indicator of excellence in Canadian science*. Statistics Canada 88-501, Ottawa.
- An indicator of excellence in Canadian science: summary report*. Statistics Canada 88-507, Ottawa.
- Industrial research and development statistics*. Statistics Canada 88-202 (annual), Ottawa.
- Patents as indicators of invention*. Statistics Canada 88-504, Ottawa.
- Productivity, science and technology*. Statistics Canada 88-505, Ottawa.
- Resources for research and development in Canada*. Statistics Canada 88-203 (annual), Ottawa.
- Service bulletins, Statistics Canada 88-001, Ottawa, as follows:
  - The investment tax credit for research and development, 1977 to 1981*.
  - The additional allowance for scientific research, 1978 to 1981*.
  - Research and development expenditures, 1984 forecast*.
  - Industrial research and development expenditures, 1975 to 1984*.
  - Regional distribution of R&D in Canada, 1977 to 1982*.
  - Regional distribution of federal expenditures on science and technology, 1982-83*.
  - Federal government expenditures on activities in the natural sciences, 1976-77 to 1984-85*.
  - Federal government expenditures on activities in the social sciences, 1984-85*.
  - Research and development in the petroleum industries, 1984*.
  - Federal government personnel engaged in scientific activities, 1984-85*.
  - The provincial research organizations, 1982*.
  - R&D expenditures of the private non-profit organizations, 1982*.
  - Technology and the balance of payments*. Statistics Canada 88-502, Ottawa.
  - Technology and commodity trade*. Statistics Canada 88-503, Ottawa.

# TABLES

.. not available  
 ... not appropriate or not applicable  
 - nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

Forecast expenditures, 1983-84; estimated expenditures, 1984-85

## 12.1 Federal government expenditures on activities in the natural sciences, by major funding department or agency (million dollars)

Department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Agriculture	158.9	171.3	196.6	219.8	264.6	292.0
Atomic Energy of Canada	93.2	100.9	103.4	129.6	139.4	148.1
Canadian International Development Agency	32.2	32.3	37.0	43.2	48.8	55.7
Communications	53.6	61.8	83.5	96.7	107.9	99.9
Energy, Mines and Resources	146.2	184.6	223.3	245.4	309.7	377.2
Environment	226.4	257.8	297.2	332.9	372.2	398.4
Fisheries and Oceans	130.2	139.8	150.8	186.2	209.9	258.4
Regional Industrial Expansion <sup>1</sup>	83.5	97.3	134.5	126.9	174.5	170.2
International Development Research Centre	18.6	20.1	24.6	26.4	30.9	38.9
Medical Research Council	70.2	82.2	100.4	113.5	141.0	157.3
National Defence	86.5	101.4	116.3	142.9	151.0	201.2
National Health and Welfare	49.8	56.6	68.6	72.4	81.6	87.1
National Research Council	205.2	230.0	285.5	352.4	438.8	524.5
Natural Sciences and Engineering Research	121.4	163.2	202.1	245.3	282.0	292.2
Transport	27.9	16.4	23.1	27.3	35.8	36.4
Other	57.5	64.6	72.3	79.3	91.4	96.5
<b>Total</b>	<b>1,561.3</b>	<b>1,780.3</b>	<b>2,119.2</b>	<b>2,440.2</b>	<b>2,879.5</b>	<b>3,234.0</b>

<sup>1</sup>Formed in 1981-82 from the departments of Industry, Trade and Commerce and Regional Economic Expansion.

## 12.2 Federal government expenditures on activities in the social sciences, by department or agency (million dollars)

Department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
Canada Mortgage and Housing Corporation	8.0	9.5	11.0	11.3	13.8	14.6
Employment and Immigration	15.7	17.7	19.2	21.2	22.4	23.8
Energy, Mines and Resources	6.5	9.6	8.9	11.2	12.1	11.1
Environment	15.2	16.5	12.1	12.4	13.5	14.3
Finance	8.7	9.1	11.6	14.2	17.8	19.8
International Development Research Centre	17.9	19.7	21.3	27.1	30.3	37.6
National Health and Welfare	16.3	15.9	17.9	21.7	25.9	28.1
National Library	18.5	21.3	28.8	34.0	38.7	38.6
National Museums	36.4	39.9	43.1	46.8	51.9	53.0
Public Archives	11.0	12.9	16.3	17.6	19.1	19.3
Science and Technology	6.2	7.6	8.5	9.3	10.7	6.9
Secretary of State	9.4	10.4	11.4	10.5	11.7	35.9
Social Sciences and Humanities Research Council	36.8	42.8	46.9	56.8	60.4	57.3
Statistics Canada	134.6	157.7	246.9	208.2	234.2	249.5
Treasury Board	11.3	12.1	14.9	17.7	19.6	20.5
Other	78.1	74.1	94.6	108.7	130.1	140.8
<b>Total</b>	<b>430.6</b>	<b>476.8</b>	<b>613.4</b>	<b>628.7</b>	<b>712.2</b>	<b>771.1</b>

**12.3 Federal expenditures on natural sciences R&D and RSA by performer (million dollars)**

Performer	1979-80		1980-81		1981-82		1982-83		1983-84		1984-85	
	\$	%	\$	%	\$	%	\$	%	\$	%	\$	%
R&D												
Intramural <sup>1</sup>	646.2	57.5	736.7	57.1	865.3	55.2	1,041.9	57.4	1,167.0	54.3	1,343.8	55.4
Industry	203.0	18.0	215.5	16.7	282.2	18.0	312.7	17.2	437.2	20.4	518.7	21.4
Universities	200.8	17.9	254.8	19.8	312.7	19.9	369.2	20.3	430.0	20.0	453.6	18.7
Non-profit institutions	8.9	0.8	8.6	0.7	5.9	0.4	6.4	0.4	18.3	0.9	10.2	0.4
Provincial and municipal	29.8	2.6	31.7	2.4	33.0	2.1	2.7	0.2	5.2	0.2	7.2	0.3
Foreign	31.7	2.8	38.8	3.0	55.5	3.5	68.7	3.8	72.6	3.4	71.5	3.0
Other Canadian	4.3	0.4	4.2	0.3	13.8	0.9	13.2	0.7	17.4	0.8	20.3	0.8
Total	1,124.7	100.0	1,290.3	100.0	1,568.4	100.0	1,814.8	100.0	2,147.7	100.0	2,425.3	100.0
RSA												
Intramural <sup>1</sup>	344.5	78.9	370.9	75.7	432.1	78.5	491.2	78.6	546.9	74.7	610.8	75.5
Industry	57.1	13.1	79.2	16.1	73.9	13.4	71.9	11.5	87.7	12.0	97.6	12.1
Universities	15.0	3.4	19.9	4.1	25.9	4.7	31.4	5.0	40.5	5.5	43.4	5.4
Non-profit institutions	2.6	0.6	3.1	0.6	2.9	0.5	4.3	0.7	3.0	0.4	3.9	0.5
Provincial and municipal	7.4	1.7	7.4	1.5	6.0	1.1	16.5	2.6	36.7	5.0	39.7	4.9
Foreign	2.8	0.7	3.3	0.7	3.9	0.7	5.0	0.8	6.2	0.9	6.9	0.8
Other Canadian	7.1	1.6	6.3	1.3	6.1	1.1	5.0	0.8	10.8	1.5	6.4	0.8
Total	436.5	100.0	490.1	100.0	550.8	100.0	625.3	100.0	731.8	100.0	808.7	100.0

<sup>1</sup>Intramural expenditures include non-program costs.**12.4 Federal expenditures on social sciences R&D and RSA by performer (million dollars)**

Performer	1980-81		1981-82		1982-83		1983-84		1984-85	
	\$	%	\$	%	\$	%	\$	%	\$	%
R&D										
Intramural <sup>1</sup>	42.6	43.9	46.8	42.5	52.4	42.2	56.0	41.7	59.4	42.1
Industry	3.2	3.3	4.6	4.2	6.7	5.4	8.3	6.2	5.9	4.2
Universities	29.8	30.7	34.2	31.0	41.9	33.7	44.6	33.2	43.9	31.1
Non-profit institutions	6.0	6.2	5.4	4.9	4.6	3.7	5.2	3.9	7.4	5.2
Provincial and municipal	2.1	2.1	3.7	3.4	1.3	1.0	1.1	0.8	1.5	1.1
Foreign	10.3	10.6	11.4	10.3	13.6	10.9	13.8	10.3	16.7	11.8
Other Canadian	3.1	3.2	4.1	3.7	3.9	3.1	5.3	3.9	6.4	4.5
Total	97.1	100.0	110.2	100.0	124.3	100.0	134.2	100.0	141.3	100.0
RSA										
Intramural <sup>1</sup>	334.8	88.2	455.8	90.6	447.7	88.8	514.3	89.0	544.4	86.4
Industry	10.3	2.7	8.6	1.7	11.4	2.3	11.9	2.1	11.8	1.9
Universities	15.5	4.1	16.0	3.2	18.8	3.7	23.3	4.0	46.6	7.4
Non-profit institutions	4.8	1.3	5.9	1.2	8.0	1.6	8.6	1.5	8.4	1.4
Provincial and municipal	5.3	1.4	6.1	1.2	7.3	1.4	7.5	1.3	7.1	1.1
Foreign	5.1	1.3	6.1	1.2	6.9	1.4	7.6	1.3	7.7	1.2
Other Canadian	4.0	1.0	4.7	0.9	4.3	0.8	4.7	0.8	3.8	0.6
Total	379.7	100.0	503.2	100.0	504.4	100.0	578.0	100.0	629.9	100.0

<sup>1</sup>Intramural expenditures include non-program costs.

**12.5 Federal scientific expenditures by application area (million dollars)**

Area and department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>Advancement of science</b>						
National Research Council	47.3	55.0	65.9	82.9	94.9	110.0
National Science and Engineering Research Council	110.1	144.7	179.6	217.8	252.2	260.4
Social Sciences and Humanities Research Council	36.6	42.4	46.6	56.4	60.0	56.9
Others	5.4	6.1	2.8	1.7	2.0	3.6
<b>Total</b>	<b>199.4</b>	<b>248.2</b>	<b>294.9</b>	<b>358.8</b>	<b>409.1</b>	<b>430.9</b>
<b>Communications</b>						
Communications	22.0	28.6	41.6	47.8	44.5	46.2
National Research Council	3.1	4.6	3.1	4.4	4.2	4.7
Natural Science and Engineering Research Council	1.0	2.1	2.9	3.6	3.6	4.2
Supply and Services (unsolicited proposals)	2.4	5.2	1.8	4.0	3.0	3.1
Others	4.8	5.8	5.2	6.2	6.4	7.0
<b>Total</b>	<b>33.3</b>	<b>46.3</b>	<b>54.6</b>	<b>66.0</b>	<b>61.7</b>	<b>65.2</b>
<b>Developing nations</b>						
Canadian International Development Agency	37.4	36.5	41.7	48.4	54.2	61.5
International Development Research Centre	36.5	39.8	45.9	53.6	61.3	76.5
Others	0.1	—	—	—	—	—
<b>Total</b>	<b>74.0</b>	<b>76.3</b>	<b>87.6</b>	<b>102.0</b>	<b>115.5</b>	<b>138.0</b>
<b>Energy</b>						
Energy, Mines and Resources	86.8	82.6	94.4	84.3	138.3	189.7
Atomic Energy of Canada Ltd.	81.7	90.6	91.9	122.5	132.3	140.7
Environment	5.1	5.4	10.2	8.5	12.4	13.0
Fisheries and Oceans	7.5	7.8	1.3	3.5	6.5	7.1
Regional Industrial Expansion	1.6	0.6	0.6	2.7	3.0	3.0
National Research Council	26.8	30.8	39.6	56.8	77.9	83.3
Natural Sciences and Engineering Research Council	3.8	6.2	6.7	7.6	8.1	7.8
Public Works	2.7	5.3	4.6	3.5	3.8	4.3
Transport	3.7	1.1	1.3	5.8	10.8	9.5
Others	3.8	4.0	6.1	9.5	15.8	16.6
<b>Total</b>	<b>223.5</b>	<b>234.4</b>	<b>256.7</b>	<b>304.7</b>	<b>408.9</b>	<b>475.0</b>
<b>Environment issues</b>						
Energy, Mines and Resources	2.6	2.9	4.5	5.3	5.7	5.7
Environment	38.4	40.8	43.6	46.0	52.0	54.0
Fisheries and Oceans	2.2	2.4	14.2	14.6	15.5	19.1
National Research Council	3.8	3.7	5.4	7.0	7.3	7.5
Natural Sciences and Engineering Research Council	2.7	3.5	3.1	3.5	3.2	3.1
Others	3.2	4.4	5.7	4.9	4.7	5.1
<b>Total</b>	<b>52.9</b>	<b>57.7</b>	<b>76.5</b>	<b>81.3</b>	<b>88.4</b>	<b>94.5</b>
<b>Food science</b>						
Agriculture	125.8	140.7	159.5	175.0	199.2	196.7
Fisheries and Oceans	36.9	36.3	58.5	82.1	92.3	109.7
National Research Council	10.0	11.2	13.3	19.6	26.8	38.3
Natural Sciences and Engineering Research Council	1.8	2.7	4.1	3.5	4.4	4.7
Statistics Canada	4.5	5.0	9.0	6.1	4.6	4.9
Others	5.1	4.0	4.9	4.9	5.1	5.4
<b>Total</b>	<b>184.1</b>	<b>199.9</b>	<b>249.3</b>	<b>291.2</b>	<b>332.4</b>	<b>359.7</b>
<b>Health science</b>						
Energy, Mines and Resources	0.9	1.3	1.1	1.1	1.4	1.1
Atomic Energy of Canada Ltd.	7.2	6.2	5.6	7.1	7.1	7.4
National Health and Welfare	48.4	55.1	65.9	69.3	78.5	85.1
Medical Research Council	70.1	82.0	100.2	113.3	140.8	157.0
National Research Council	9.2	11.0	14.4	17.4	21.7	29.1
Statistics Canada	3.3	3.4	5.1	5.2	5.2	5.5
Others	0.6	0.6	0.1	0.4	0.5	0.6
<b>Total</b>	<b>139.7</b>	<b>159.6</b>	<b>192.4</b>	<b>213.8</b>	<b>255.2</b>	<b>285.8</b>

## 12.5 Federal scientific expenditures by application area (million dollars) (continued)

Area and department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>Oceans science</b>						
Energy, Mines and Resources	5.6	7.6	5.9	9.4	6.6	8.1
Environment						
Atmospheric Environment Service	9.0	10.0	11.9	13.7	16.5	22.7
Fisheries and Oceans	30.9	31.2	45.2	38.5	50.1	58.3
National Research Council	4.5	4.7	5.3	2.8	3.8	4.6
Natural Sciences and Engineering Research Council	1.6	2.4	2.7	3.3	2.9	3.1
Regional Economic Expansion	1.2	—	0.1	—	—	—
Others	1.8	1.1	1.0	2.5	7.2	5.9
<b>Total</b>	<b>54.6</b>	<b>57.0</b>	<b>72.1</b>	<b>70.2</b>	<b>87.1</b>	<b>102.7</b>
<b>Policy development</b>						
Economic Council of Canada	—	8.0	7.6	7.6	8.1	8.3
Energy, Mines and Resources	—	—	—	—	1.2	—
Statistics Canada	107.1	126.0	197.2	166.1	178.4	190.6
Others	24.6	28.5	41.3	49.2	68.3	67.2
<b>Total</b>	<b>131.7</b>	<b>162.5</b>	<b>246.1</b>	<b>222.9</b>	<b>256.0</b>	<b>266.1</b>
<b>Water resources</b>						
Environment	16.1	16.2	17.1	19.5	21.4	24.3
Others	0.4	1.2	1.4	1.4	2.3	2.1
<b>Total</b>	<b>16.5</b>	<b>17.4</b>	<b>18.5</b>	<b>20.9</b>	<b>23.7</b>	<b>26.4</b>
<b>Forestry resources</b>						
Environment	35.8	46.2	52.0	48.5	54.8	53.3
Others	0.3	0.3	0.5	1.3	1.0	1.0
<b>Total</b>	<b>36.1</b>	<b>46.5</b>	<b>52.5</b>	<b>49.8</b>	<b>55.8</b>	<b>54.3</b>
<b>Mineral resources</b>						
Energy, Mines and Resources	32.4	21.4	50.3	58.9	67.8	81.0
Others	0.3	0.1	1.8	0.1	0.9	0.6
<b>Total</b>	<b>32.7</b>	<b>21.5</b>	<b>52.1</b>	<b>59.0</b>	<b>68.7</b>	<b>81.6</b>
<b>Other resources</b>						
Agriculture	17.3	11.4	13.2	19.1	34.6	58.2
Energy, Mines and Resources	0.6	22.0	1.9	10.8	12.1	12.7
Environment	10.4	10.5	12.0	13.7	15.1	17.1
Others	0.1	0.4	1.1	1.1	0.3	0.3
<b>Total</b>	<b>28.4</b>	<b>44.3</b>	<b>28.2</b>	<b>44.7</b>	<b>62.1</b>	<b>88.3</b>
<b>Domestic security</b>						
Justice	2.8	2.7	3.9	4.1	4.5	3.9
Law Reform Commission	2.3	1.5	2.4	2.6	3.7	3.6
Solicitor General	2.5	3.1	9.7	9.6	8.5	11.7
Others	0.1	2.7	2.5	2.9	3.1	3.2
<b>Total</b>	<b>7.7</b>	<b>10.0</b>	<b>18.5</b>	<b>19.2</b>	<b>19.8</b>	<b>22.4</b>
<b>National security</b>						
Energy, Mines and Resources	0.7	0.8	0.9	1.2	1.5	1.6
National Defence	87.1	102.6	117.7	143.9	151.9	202.1
Others	4.6	5.8	0.8	0.1	0.2	0.1
<b>Total</b>	<b>92.4</b>	<b>109.2</b>	<b>119.4</b>	<b>145.2</b>	<b>153.6</b>	<b>203.8</b>
<b>Social development</b>						
Canada Employment and Immigration Commission	5.8	7.8	9.3	8.1	9.1	9.6
Employment and Immigration	1.8	9.5	9.6	12.5	12.8	13.6
Indian and Northern Development	0.8	—	0.4	—	—	—
Labour	3.2	3.8	4.2	3.8	4.4	4.4
National Health and Welfare	9.3	6.5	7.7	8.1	9.4	9.7
National Research Council	2.7	—	—	—	—	—
Statistics Canada	2.6	2.8	3.8	4.1	5.2	5.6
Others	4.1	4.8	1.3	1.7	1.8	2.3
<b>Total</b>	<b>30.3</b>	<b>35.2</b>	<b>36.3</b>	<b>38.3</b>	<b>42.7</b>	<b>45.2</b>

**12.5 Federal scientific expenditures by application area (million dollars) (concluded)**

Area and department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>Space science and satellite technology</b>						
Communications	36.6	36.7	45.7	52.0	64.8	55.9
Environment	2.0	2.0	2.3	5.1	5.5	6.0
National Research Council	18.7	18.5	17.4	17.8	24.2	31.0
Others	0.5	1.8	2.3	2.0	2.5	2.7
<b>Total</b>	<b>57.8</b>	<b>59.0</b>	<b>67.7</b>	<b>76.9</b>	<b>97.0</b>	<b>95.6</b>
<b>Transportation</b>						
Energy, Mines and Resources	1.9	2.1	0.8	2.1	2.1	1.8
Fisheries and Oceans	23.1	23.9	31.2	46.8	43.8	63.3
National Research Council	17.3	18.4	26.2	34.0	48.5	51.0
Transport Canada	24.0	16.1	21.7	20.8	24.8	26.4
Canada Transport Commission	2.7	2.8	2.7	3.2	3.4	3.4
Statistics Canada	2.6	3.0	3.1	3.2	3.6	3.9
Others	0.9	1.2	1.5	0.7	0.8	1.4
<b>Total</b>	<b>72.5</b>	<b>67.5</b>	<b>87.2</b>	<b>110.8</b>	<b>127.0</b>	<b>151.2</b>
<b>Other</b>						
Energy, Mines and Resources	30.7	37.8	47.5	54.0	54.4	50.1
Environment	102.3	115.3	127.5	154.4	169.6	181.4
Regional Industrial Expansion	79.1	94.4	131.1	122.0	165.1	161.3
National Research Council	57.2	64.6	88.0	101.5	139.6	154.6
Natural Sciences and Engineering Research Council	—	1.1	2.6	5.4	7.0	8.2
Others	154.9	155.6	181.5	181.5	204.1	232.5
<b>Total</b>	<b>424.2</b>	<b>468.8</b>	<b>578.2</b>	<b>618.8</b>	<b>739.8</b>	<b>788.1</b>

**12.6 Federal employees engaged in R&D and RSA in the natural sciences by major department or agency (person years)**

Department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>R&amp;D</b>						
Agriculture	3,811.0	3,788.0	3,887.0	3,916.0	3,860.0	3,712.0
Atomic Energy of Canada Ltd.	2,206.0	2,260.0	2,340.0	2,451.0	2,495.0	2,526.0
Communications	538.0	559.0	575.0	639.0	613.0	596.0
Energy, Mines and Resources	1,374.0	1,376.0	1,381.0	1,468.0	1,491.0	1,541.0
Environment	1,599.0	1,612.0	1,616.0	1,632.0	1,644.0	1,651.0
Fisheries and Oceans	1,207.0	1,228.0	1,384.0	1,486.0	1,487.0	1,526.0
National Defence	1,760.0	1,730.0	1,795.0	1,776.0	1,783.0	1,814.0
National Health and Welfare	145.0	218.0	227.0	188.0	195.0	187.0
National Research Council	2,437.0	2,404.0	2,435.0	2,715.0	2,767.0	2,817.0
Other	235.0	103.0	112.0	141.0	131.0	138.0
<b>Total</b>	<b>15,312.0</b>	<b>15,278.0</b>	<b>15,752.0</b>	<b>16,412.0</b>	<b>16,466.0</b>	<b>16,508.0</b>
<b>RSA</b>						
Agriculture	219.0	203.0	219.0	218.0	229.0	226.0
Atomic Energy of Canada Ltd.	116.0	134.0	146.0	156.0	157.0	160.0
Energy, Mines and Resources	852.0	862.0	845.0	872.0	853.0	840.0
Environment	3,019.0	2,996.0	2,974.0	2,966.0	2,968.0	2,978.0
Fisheries and Oceans	815.0	815.0	1,042.0	1,027.0	1,040.0	1,062.0
National Defence	30.0	31.0	30.0	29.0	32.0	34.0
National Health and Welfare	867.0	942.0	852.0	975.0	999.0	996.0
National Research Council	584.0	603.0	607.0	499.0	504.0	515.0
Other	820.0	843.0	823.0	776.0	759.0	757.0
<b>Total</b>	<b>7,322.0</b>	<b>7,429.0</b>	<b>7,538.0</b>	<b>7,518.0</b>	<b>7,541.0</b>	<b>7,568.0</b>

### 12.7 Federal employees engaged in R&D and RSA in the social sciences by major department or agency (person years)

Department or agency	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85
<b>R&amp;D</b>						
Canada Employment and Immigration Commission	—	—	—	—	—	—
Economic Council	194.0	131.0	119.0	116.0	114.0	113.0
Employment and Immigration	28.0	25.0	20.0	20.0	19.0	19.0
Environment	18.0	18.0	18.0	18.0	18.0	18.0
Finance	—	—	—	—	—	—
Energy, Mines and Resources	—	—	—	—	2.0	—
International Development Research Centre	—	—	—	—	—	—
National Health and Welfare	27.6	25.8	27.7	18.0	22.5	23.1
National Library	—	—	—	—	—	—
National Museums	63.0	60.0	60.0	60.0	60.0	51.0
Public Archives	—	—	—	—	—	—
Secretary of State	117.0	117.0	141.0	116.0	45.0	45.0
Statistics Canada	111.0	110.0	123.0	133.0	145.0	143.0
Treasury Board	—	—	—	—	—	0.0
Other	375.3	328.4	332.6	276.2	279.0	281.2
<b>Total</b>	<b>933.9</b>	<b>815.2</b>	<b>841.3</b>	<b>757.2</b>	<b>704.5</b>	<b>693.3</b>
<b>RSA</b>						
Canada Employment and Immigration Commission	168.0	159.0	147.0	163.0	168.0	168.0
Economic Council	34.0	26.0	24.0	22.0	21.0	20.0
Employment and Immigration	322.0	310.0	293.0	307.0	320.0	330.0
Environment	223.0	224.0	218.7	218.0	218.0	218.0
Finance	211.9	208.3	217.3	246.5	259.0	293.0
Energy, Mines and Resources	122.0	158.0	105.0	134.0	133.0	132.0
International Development Research Centre	64.5	68.0	62.1	60.5	64.0	66.5
National Health and Welfare	112.3	110.9	115.8	132.1	173.9	171.2
National Library	500.0	500.0	517.0	542.0	540.0	526.0
National Museums	612.0	610.0	588.0	592.0	596.0	604.0
Public Archives	271.0	266.0	279.0	281.0	282.0	282.0
Secretary of State	87.0	74.0	45.0	72.0	24.0	28.0
Statistics Canada	4,423.0	4,509.0	5,366.0	4,607.0	4,506.0	4,462.0
Treasury Board	219.0	219.0	232.0	238.0	242.0	238.0
Other	1,011.8	1,015.3	1,298.4	1,100.6	1,195.5	1,162.7
<b>Total</b>	<b>8,381.5</b>	<b>8,457.5</b>	<b>9,508.3</b>	<b>8,715.7</b>	<b>8,742.4</b>	<b>8,701.4</b>

### 12.8 Expenditures of provincial research organizations (million dollars)

Organization	1979	1980	1981	1982	1983
British Columbia Research Council	4.8	6.6	8.1	8.3	8.0
Alberta Research Council	21.0	22.7	29.8	34.7	41.2
Saskatchewan Research Council	6.1	8.1	10.3	10.2	9.5
Manitoba Research Council	1.9	3.2	2.9	4.6	5.3
Ontario Research Foundation	13.9	16.8	22.3	19.8	20.3
Centre de recherche industrielle du Québec	10.3	12.2	13.9	15.4	18.5
New Brunswick Research and Productivity Council	2.6	3.4	4.3	5.2	5.0
Nova Scotia Research Foundation	3.0	3.4	4.0	5.4	5.4
<b>Total</b>	<b>63.6</b>	<b>76.4</b>	<b>95.6</b>	<b>103.6</b>	<b>113.2</b>

### 12.9 Current expenditures of provincial research organizations by scientific activity, 1982 (thousand dollars)

Provincial research organization	Scientific research	Development	Resource surveys	Analysis and testing	Industrial engineering	Other <sup>1</sup>	Total
Nova Scotia	569	1,965	569	414	259	1,396	5,172
New Brunswick	1,019	648	—	1,574	695	694	4,630
Quebec	696	8,067	—	3,181	—	2,258	14,202
Ontario	3,800	7,399	—	6,400	210	960	18,769
Manitoba	341	1,024	—	682	512	852	3,411
Saskatchewan	2,920	1,130	1,978	1,790	441	1,506	9,765
Alberta	6,031	12,670	4,223	1,206	1,206	4,828	30,164
British Columbia	3,066	467	—	566	656	3,442	8,197
<b>Total</b>	<b>18,442</b>	<b>33,370</b>	<b>6,770</b>	<b>15,813</b>	<b>3,979</b>	<b>15,936</b>	<b>94,310</b>

<sup>1</sup>Feasibility studies, \$6.8 million; library and technical information, \$6.1 million; industrial innovation, \$2.9 million; and other, \$0.1 million.

#### Source

12.1 - 12.9 Science and Technology Statistics Division, Statistics Canada.

CHAPTER 13

---

# TRANSPORTATION



## HIGHLIGHTS

---

Are Canadians always on the go? More than 21.3 million revenue passengers in Canada travelled by train in 1982, more than 24.4 million by scheduled and charter air services and about 31 million on the intercity bus system.

Almost 60% of all transportation activity is in urban areas, where the majority of the population lives. About four-fifths of all urban travel is by private automobile.

An estimated 6.7 million Canadians travel to work each day in 5.6 million automobiles. About 1.4 million commute by public transportation, with the largest concentration in Montréal, Toronto and Ottawa-Hull.

In freight handling, railways are indispensable for carrying bulk commodities. Pipelines compete as an alternative for transporting oil and gas products. Trucks are the most versatile goods-moving vehicles, not bound by tracks or waterways.

Growth of containerization has added momentum to the integration of railway, highway and water transport.

Because of Canada's size, geography and dependence on trade, water transport has always played a dominant role in the economic system.

## CHAPTER 13

---

# TRANSPORTATION

---

<b>13.1</b>	<b>Regulation and co-ordination</b>	<b>409</b>
13.1.1	Rail	409
13.1.2	Air	409
13.1.3	Road transport	410
13.1.4	Water transport	410
<hr/>		
<b>13.2</b>	<b>Air transport</b>	<b>411</b>
13.2.1	Domestic commercial air services	411
13.2.2	International commercial air services	411
13.2.3	Carriers	411
13.2.4	Civil aviation	412
13.2.5	Air transport statistics	412
<hr/>		
<b>13.3</b>	<b>Rail transportation</b>	<b>413</b>
13.3.1	Railway systems	413
13.3.2	Via Rail Canada Inc.	413
13.3.3	Rail transport statistics	413
<hr/>		
<b>13.4</b>	<b>Road transport</b>	<b>414</b>
13.4.1	Highways	414
13.4.2	Motor vehicles	414
13.4.3	Urban transportation	415
13.4.4	Intercity buses	415
13.4.5	Travel to work	416
13.4.6	Trucking	416
<hr/>		
<b>13.5</b>	<b>Water transport</b>	<b>416</b>
13.5.1	Canadian water carriers	417
13.5.2	Freight movement	417
13.5.3	Ports and harbours	417
13.5.4	Ferries	418
13.5.5	St. Lawrence Seaway	418
13.5.6	Canadian Coast Guard	418
<hr/>		
<b>13.6</b>	<b>Expo 86</b>	<b>419</b>

---

## TABLES

13.1	Aircraft movements	420
13.2, 13.3	Commercial air services	420
13.4	Railway trackage operated	421
13.5	Rolling-stock in service	422
13.6	Commodities hauled as freight	422
13.7	Finances of the railway systems	423
13.8	Construction costs: highways, roads, streets and bridges	424
13.9, 13.10	Motor vehicle registration	425
13.11	Sales of motive fuels	427
13.12	Intercity bus industry	427
13.13	Canadian urban transit	428
13.14	Motor carrier commodities	430
13.15-13.18	Trucking industry statistics	430
13.19	Vessels entered at ports	435
13.20, 13.21	Cargoes loaded and unloaded	435
13.22	Ports Canada harbours	437
13.23	St. Lawrence Seaway statistics	438

## CHART

Chart 13.1	Kilometre guide	415
------------	-----------------	-----

## CHAPTER 13

# TRANSPORTATION

Transportation is a vital element in the social and economic structure of Canada. Although the country is second-largest in physical size in the world it is only 28th in population size. Most of the population is concentrated near the southern border, so transportation is almost entirely linear. Establishment of the more economic circular routes common in the United States is possible only regionally in Canada. Nevertheless, good transportation services and facilities must be provided to remote areas including the Arctic.

Development of efficient transportation systems in Canada is further hampered by problems inherent in geography and climate. Vast areas of muskeg north of Lake Superior, the rocky terrain of the Precambrian Shield and the paucity of passes through the Rocky Mountains pose difficult problems for the builders of railways and highways. The frequent temperature changes from severe cold to thaw which are characteristic of Canadian winters break up road surfaces prematurely. The salt used to keep roads clear of ice erodes the undercarriages of automobiles travelling on those roads. Introduction of new technology such as the turbo-train has been frustrated by the inability of some systems to function in extremes of temperature. Removal of snow, not only from roads but also from airport runways and railway and subway tracks, is a costly winter necessity.

### 13.1 Regulation and co-ordination

Regulation and control of transportation is under the jurisdiction of Transport Canada, the Canadian Transport Commission (CTC) and their provincial counterparts. In general, Transport Canada co-ordinates transportation activities under federal jurisdiction, sets safety standards, provides infrastructure and controls navigation. The CTC licenses and regulates commercial carriers. Both monitor and develop aspects of national transportation policy. Since their roles vary from mode to mode, their powers are described under each mode. For a definitive outline of their powers, see Appendix 1.

#### 13.1.1 Rail

Under the Railway Act, the CTC through its railway transport committee has jurisdiction over construction,

maintenance and operation of railways that are subject to the legislative authority of Parliament. In general all railways operating in more than one province or territory, and US railroads extending into Canada, are under federal jurisdiction. Matters regulated by the CTC include location of lines, crossings and crossing protection, safety of train operation, operating rules, investigation of accidents, accommodation for traffic and facilities for service, abandonment of lines and uniformity of railway accounting. Transport Canada is involved in the provision and support of rail passenger and freight services. The department provides funding and policy direction to VIA Rail Canada Inc. which operates intercity passenger services over Canadian National and Canadian Pacific lines. Involvement in freight services is concentrated on grain transportation, through the provision of hopper cars and terminal facilities, and the rehabilitation of prairie branch lines.

#### 13.1.2 Air

Under the Aeronautics Act, the CTC through its air transport committee is responsible for the economic regulation of commercial air services in Canada and of foreign air services operating into and out of Canada, and participates in bilateral negotiations for the exchange of traffic rights. Regulations deal with, among other things, classification of carriers and services, licences, tariffs, service schedules and statistical reporting.

The technical side of civil aviation under the Aeronautics Act deals with such matters as aircraft registration, licensing of personnel, establishment and maintenance of airports and air navigation facilities, air traffic control, accident investigation and the safe operation of aircraft. It is administered by the Canadian air transport administration (CATA) of Transport Canada. In compliance with a 1970 CATA policy decision, the airworthiness branch of aviation regulation validates the airworthiness certification of all foreign and domestic manufactured aircraft and components before it issues a type approval or a certificate of airworthiness. It also ensures that manufacturers and repair organizations comply with Canadian airworthiness standards. Until recently Transport Canada was responsible for

the investigation of aircraft accidents. As of October 1984 this task is performed by the Canadian Aviation Safety Board which reports to Parliament through the Minister of Transport.

Because of Canada's geographical location and the important place of aviation in Canada, co-operation with other nations engaged in international civil aviation is essential. Canada therefore played a major part in the establishment of the International Civil Aviation Organization (ICAO) with headquarters in Montréal. At the end of 1983, 35 countries were entitled to provide scheduled services to Canada with bilateral agreements that were in force.

### 13.1.3 Road transport

Transport Canada administers the Motor Vehicle Safety Act and the Motor Vehicle Tire Safety Act to ensure that new motor vehicles at point of manufacture in Canada or imported into Canada, and certain motor vehicle tires, meet minimum safety standards. Safety and environmental protection standards refer to design, construction and functioning of new motor vehicles. They apply to passenger cars, trucks, buses, motorcycles, minibikes, trailers and snowmobiles. Some standards limit motor vehicle exhaust evaporation and noise emissions. The standards are reviewed and revised regularly to keep pace with engineering or technical advances.

The safety of vehicles in use is a provincial responsibility. Each province has enacted safety responsibility legislation. In general, laws provide for the automatic suspension of the driver's licence and motor vehicle registration of a person convicted of a serious offence (impaired driving, driving under suspension, dangerous driving) or a person whose uninsured vehicle is involved directly or indirectly in an accident resulting in damage of a specific amount, or injury to or death of any person.

Motor vehicles and trailers are usually registered annually with the payment of specific fees and are required to carry registration plates. In some provinces, multi-year licence plates are issued and validated annually by stickers.

Although the CTC through its motor vehicle transport committee has the authority to regulate interprovincial and international for-hire trucking, that power is presently delegated to the provinces. Under their own legislation the provinces may regulate intraprovincial for-hire trucking.

### 13.1.4 Water transport

The Canada Shipping Act is the most significant statute dealing with shipping. Other legislative measures include the Pilotage Act, the Arctic Waters Pollution Act and the Navigable Waters Protection Act. Under these acts and their amendments, the federal government has complete responsibility for controlling shipping in Canadian waters.

Through its water transport committee, the CTC administers a variety of acts and regulations. As

provided by the Transport Act, the CTC grants licences for ships to transport goods and passengers between ports or places in Canada on the Great Lakes, on the St. Lawrence River and Mackenzie River, and in the Western Arctic. The CTC, under the Pilotage Act, is empowered to investigate objections to proposed tariffs of pilotage charges, to hold public hearings, and to make recommendations to the appropriate pilotage authority. Under the Shipping Conference Exemption Act, ocean carriers which are members of a shipping conference have been required to file with the CTC copies of their agreements, arrangements, contracts, patronage contracts and tariffs. The CTC is also authorized, under the St. Lawrence Seaway Authority Act, to consider any complaint of unjust discrimination in an existing tariff and to report its findings to the authority. The CTC also administers the issuance of waivers permitting foreign ships to operate revenue services between Canadian ports.

Transport Canada's Canadian marine transportation administration (CMTA) co-ordinates the functions of the Canadian Coast Guard, the Canada Ports Corp., a harbours and ports directorate, four pilotage authorities, the St. Lawrence Seaway Authority, the Canarctic Shipping Company Ltd. and the Northern Transportation Co. Ltd. The CMTA has responsibility for ports, public harbours and government wharves. Canada Ports Corp., a Crown corporation established in 1983 and known as Ports Canada, is responsible for the administration of 15 ports. Local port corporations have been created for the five ports of Vancouver, Prince Rupert, Montréal, Québec City and Halifax. Ports Canada is responsible for ensuring that the ongoing maintenance, upgrading and major expansions to port facilities will provide enhanced services to port users on a competitive and cost-effective basis. Under a new national ports policy, Ports Canada is expected to set up a framework for broader regional participation in the overall planning and development of the ports.

Within CMTA, the harbours and ports directorate consists of 366 small transportation port facilities which handle some 20% of Canada's waterborne traffic. The directorate also assumes ministerial responsibilities for the nine harbour commissions of Port Alberni, Nanaimo, Fraser River, North Fraser, Lakehead, Windsor, Hamilton, Toronto and Oshawa. Many of the government wharves for which CMTA is responsible are located in public harbours and are used for commercial traffic including auto, truck and passenger ferries.

**The Canadian Coast Guard**, part of CMTA, is primarily responsible for safety at sea. It must ensure that ships can navigate safely in Canadian waters, that all Canadian ships and ships voyaging in Canadian waters are in seaworthy condition, and

that appropriate control is maintained over ships operating in Canadian waters. To achieve these goals, the coast guard has legal powers established mainly through the Canada Shipping Act. It provides a system of navigational aids including radar responders and channel markers. It develops and sets national standards for design and construction of ships and their equipment; methods of handling cargo; safe working practices in ships; life-jackets and other emergency flotation devices; number, qualifications and certification of seagoing personnel, discipline on board ships, bridge-to-bridge communications between ships, and safe navigating and operating procedures. The coast guard is responsible for the marine element of search and rescue operations in Canada, working closely with national defence staff to ensure that the most suitable equipment reaches the scene promptly.

Other responsibilities of the coast guard include the operation of the registry of ships, administration of the licensing of small vessels, clearing channels of ice for winter and Arctic navigation, and protection of the interests of owners of wrecked ships and their cargoes. It is also responsible for minimizing pollution from ships under the Canadian Shipping Act and the applicable sections of the Arctic Waters Pollution Prevention Act.

Pilotage is mandatory in certain Canadian waters. The coast guard establishes national standards and maintains liaison with the Atlantic, Laurentian, Great Lakes and Pacific pilotage authorities which administer the provisions of the Canada Pilotage Act and related regulations.

## 13.2 Air Transport

The CTC air transport committee licenses commercial air carriers to perform specific types of services.

### 13.2.1 Domestic commercial air services

Domestic commercial air services, performed wholly within Canada, are licensed under seven classes:

**Scheduled** services provide public transportation of persons, goods or mail, serving points in accordance with a service schedule at a toll per unit.

**Regular specific point** services, to the extent possible, provide public transportation, serving points in accordance with a service pattern at a toll per unit.

**Specific point** services offer public transportation, serving points consistent with traffic requirements and operating conditions at a toll per unit.

**Charter** services offer public transportation on reasonable demand from a base specified in the licence, at a toll per kilometre or per hour for the charter of an entire aircraft or at such other tolls as may be permitted by the air transport committee.

**Contract** services offer transportation from the base specified in the licence, solely under contract and not to the general public.

**Flying club** services provide flying training and recreational flying to members of a non-profit flying club from the base specified in the licence.

**Specialty** services operate for purposes not provided for by any other classes, such as aerial application and distribution (crop dusting, seeding), aerial construction (hoisting, pole-setting), aerial control (fire-fighting, fog dispersal), aerial inspection, reconnaissance and advertising, aerial photography and survey, flying training and recreational flying.

### 13.2.2 International commercial air services

These services, operated by both Canadian and foreign carriers between Canada and any other country, are licensed under five classes:

**International scheduled** services provide public transportation of persons, goods or mail between points in Canada and points in any other country in accordance with a service schedule at a toll per unit.

**International regular specific point** services provide public transportation between points in Canada and points in any other country, to the extent possible, in accordance with a service pattern at a toll per unit.

**International specific point** services offer public transportation between points in Canada and points in any other country consistent with traffic requirements and operating conditions at a toll per unit.

**International charter** services offer public transportation on reasonable demand between Canada and any other country at a toll per kilometre or per hour for the charter of an entire aircraft, or such other basis as may be allowed by the air transport committee.

**International contract** services offer transportation between Canada and any other country from the base specified in the licence, solely under contract and not to the general public.

### 13.2.3 Carriers

**Canadian carriers.** For statistical purposes, Canadian carriers were assigned to new reporting levels under revised air carrier regulations implemented at the beginning of 1981. Consequently, data for that year are only roughly comparable to those for previous years. Effectively, Level I now comprises those carriers which in 1980 were in Levels I and II, namely Air Canada, CP Air, Eastern Provincial, Nordair, Québecair and Pacific Western, and in addition, Wardair. Together these airlines earned 83% of total operating revenues for Canadian commercial air carriers. The remaining 17% was earned by 777 smaller air carriers providing public transportation services which are assigned to Levels II through V depending not only on revenue but on licences held, number of passengers carried and tonnes of goods enplaned. Many of these operate in areas of Canada which are relatively inaccessible by surface transport. Some of these carriers provide a

variety of specialty or non-transport services involving activities such as aerial surveys and crop dusting.

**Air Canada**, a Crown corporation incorporated in 1937 as Trans-Canada Air Lines, maintains passenger, mail and commodity services over a network extending to some 60 destinations in Canada, the United States, Great Britain, Europe, Asia and the Caribbean. As well, it has extensive charter operations to the southern United States and the Caribbean.

**Canadian Pacific Air Lines, Ltd. (CP Air)**, a private company, was established in 1942 by integrating 10 air carrier bushline companies operating in Western Canada, and has since developed into a major international airline linking Canada, through both scheduled and charter services, with cities in North and South America, Europe, Asia and Australasia.

**Pacific Western Airlines Ltd.** operates scheduled passenger and cargo services in western and northwestern Canada, as well as to Toronto in Eastern Canada and a transborder service to Seattle.

**Wardair Canada Ltd.** is Canada's principal charter airline. It provides domestic and international charter services, especially to Europe, the United States and the Caribbean.

**Nordair Ltée - Ltd.** was established in 1957 by the merger of Mont Laurier Aviation and Boreal Airways. It operates scheduled services in Quebec, Ontario and Northwest Territories, and to Winnipeg and Pittsburgh, as well as extensive domestic and international charter flights throughout Canada and from Eastern Canada to the southern United States, the Caribbean and Mexico.

**Eastern Provincial Airways (1963) Ltd.**, now a subsidiary of CP Air, provides scheduled services in the Atlantic provinces and Quebec.

**Québecair**, with its head office at Montréal International Airport, Dorval, offers scheduled services in Quebec and Labrador, and handles flights by light aircraft, charter and contract services.

**Commonwealth and foreign scheduled air services.** At the end of 1983, 36 foreign air carriers licensed to provide international scheduled commercial air services into and out of Canada were operating such services. These carriers connect Canada with 30 countries in six continents. For most areas, the passenger has the option of flying with either a Canadian or a foreign airline having comparable frequencies and services.

### 13.2.4 Civil aviation

**Airports.** Of the approximately 2,200 aerodromes in Canada, half hold operating licences from Transport Canada, which itself owns some 160 aerodromes and operates 90. These include such major international airports as Vancouver, Calgary, Edmonton and Montréal, as well as both large and small airports at scattered locations across the country and extending far into the Arctic. Municipalities and other organiza-

tions operate the rest of the Transport Canada airports. Municipal airports served by scheduled air services are eligible for an operating subsidy. Transport Canada also provides capital grants to help in the construction of smaller community airports.

**Air traffic control.** The primary functions of air traffic control are to prevent collisions between aircraft operating within controlled airspace or between aircraft and obstructions in the manoeuvring area of controlled airports, and to expedite and maintain a safe, orderly flow of air traffic. These functions are carried out by controllers in airport control towers, terminal control units and area control centres.

An airspace reservation co-ordination office in Ottawa provides reserved airspace for specified operations in controlled airspace, and information to pilots concerning both these reservations and military activity areas in controlled and uncontrolled airspace. These responsibilities apply to all Canadian airspace and the Gander oceanic control area.

**Telecommunications and electronics.** The Canadian air transportation administration (CATA) also provides telecommunications electronics and flight service to other parts of the department, other departments and agencies and to civil aviation users in Canada. The CATA prepares specifications, designs telecommunications and electronic systems, procures electronic equipment and systems employed in civil aviation in Canada, and also maintains this highly complex equipment.

Flight service specialists employed at flight service (radio) stations are responsible for pre-flight weather briefings, flight planning, monitoring of sophisticated aids to navigation, broadcast services and airport advisory services to aircraft.

### 13.2.5 Air transport statistics

Collection and processing of data filed by air carriers with the CTC air transport committee, and administrative data on aircraft movements at airports operated by Transport Canada and selected other airports, is the responsibility of the aviation statistics centre, a section of the transportation and communications division of Statistics Canada. The centre is co-located with the Canadian Transport Commission to meet the internal information needs of both the CATA and the CTC. In addition the centre conducts Statistics Canada's air statistics publication program, including the following data.

**Airport activity.** In 1983, air traffic activity decreased for the fourth consecutive year. The 61 major airports reported 5.3 million aircraft movements (landings and take-offs). This represented a decrease of 5.7% from 1982, a decline of 26.8% since 1978 and a return to the level reported by 56 airports in 1973. The 202 smaller airports without control towers which reported daily traffic counts registered 1.9 million movements.

Toronto International airport was not only the busiest airport in Canada in 1983 in total air traffic

activity, with 238,305 movements, but also continued to lead in number of itinerant movements, with 235,467. It was followed by Vancouver International with 222,526 and Montréal International (Dorval) with 149,092. Traffic at these three airports accounted for 20.8% of the total itinerant traffic reported by the 61 airports with Transport Canada control towers. Light aircraft weighing under 2 000 kg accounted for 47.7% of these itinerant movements. Large aircraft, such as the Boeing 747, DC-8 and DC-10, accounted for 97,969 movements or 3.4%. Piston engine aircraft contributed 54.3%, jet aircraft 27.4% and turbo-props, helicopters and gliders the remainder.

In 1983 there were 287,965 international movements recorded at airports with control towers, up 3.2% from the 1982 total of 279,034. The 1983 total consisted of 250,813 transborder movements (to and from the United States) and 37,152 other international movements.

Domestic charter movements by air carriers, as reported by all airports with control towers, rose by 39.6% from 42,564 in 1982 to 59,418 in 1983. Charter transborder movements were up 6.5% to 16,736 from 15,718. Charter movements to and from other international points were up by 14.0% to 9,817 from 8,611.

The busiest airport in Canada in 1983 in terms of local movements and second in total traffic activity was Saint-Hubert, Que. near Montréal, with 235,414 movements, of which 152,964 were local, related to pilot training or recreational flying.

**Commercial air services.** Tables 13.2 and 13.3 provide statistics on commercial air services of Canadian airlines. Table 13.2 provides summary data on air transport operations, both regular scheduled services and charter services from 1978 to 1982, as well as operating and financial statistics on all flying operations. Table 13.3 contains comparative data for domestic and international traffic in 1981 and 1982.

### 13.3 Rail transportation

In Canada, railways began carrying passengers nearly 150 years ago. Built initially to link the Atlantic and Pacific coasts, Canada's major railways were instrumental in opening the west to settlement. Now they are concerned principally in the movement of freight, especially bulk commodities, to processing plants or to markets. Passenger services over their lines are provided by a separate corporation.

In recent years, railways have faced strong competition from highway and marine transport. Still indispensable for carrying bulk commodities, railways facilitate the development of natural resources in isolated areas. Only pipelines have competed with them by providing an alternate economical means of transporting the products of oil and gas fields for long distances overland.

The rapid growth of containerization has contributed momentum to the integration of railway, highway, shipping and other modes of transport. Canada's two major railways are heavily involved in several forms of transportation. They have evolved from purely rail operations to highly-integrated multimodal transportation systems.

#### 13.3.1 Railway systems

Canadian railway transport is dominated by two transcontinental systems, supplemented by some 30 regional railways. The government-owned Canadian National Railway system is the largest transportation enterprise and operates the longest trackage in Canada. It serves all 10 provinces and the Great Slave Lake area of Northwest Territories. CP Rail, operated by a joint-stock corporation Canadian Pacific Ltd., provides services in eight provinces.

Regional railways provide railway services meeting the special needs of their areas of operation, particularly in British Columbia and Northern Ontario. In addition, both Canadian railways and US railroads provide connecting services between the two countries.

#### 13.3.2 VIA Rail Canada Inc.

**VIA Rail Canada Inc.**, a Crown corporation, runs passenger trains over CN and CP tracks. It was incorporated in January 1977 with a mandate to revitalize passenger rail services in Canada and to manage and market them on an efficient commercial basis, reducing the financial burden on the government. VIA operates under contract with the federal government to provide designated passenger rail services, entering into contracts with the railways for the operation of trains. Its income is derived from passenger revenues and payments received from the federal government under passenger rail service contracts. With the exception of commuter services, VIA is totally responsible for all intercity passenger trains previously operated by CN and CP Rail, and has integrated the passenger rail services staffs of the two railways under a single administration.

#### 13.3.3 Rail transport statistics

**Trackage and rolling stock.** Table 13.4 illustrates the historical development of first main track from 28 416 km in 1900 to 70 858 km in 1960 and to 65 819 km at the end of 1982. It also presents statistics on main and other types of track by province and territory and that operated by Canadian railways in the US for the years 1978 to 1981. Because of a change in reporting requirements, first main track data are not available from 1982.

Table 13.5 gives freight and passenger equipment in operation at year end for the years 1978 to 1981. Because of new reporting requirements, the same breakdown is not available for 1982 and future years. However, the new designators will better reflect the modernization of railway rolling stock in use. Freight

carrying capabilities of the railways are steadily being improved with larger, more efficient cars and locomotives and modernized handling and terminal services. Each year hundreds of units, particularly freight cars, are converted and modified for specific types of traffic and replaced by special-purpose equipment for particular hauling jobs. Passenger trains as well are lighter and faster than formerly, with meal service modelled more on the airlines and take-out counters than on hotel dining-rooms.

**Revenue freight.** Total freight carried by all common carrier railways, including national loadings and receipts from US connections, in the years 1978-82 is shown in Table 13.6 under the commodity structure adopted in 1970 based on Statistics Canada's commodity classification. The data reflect a worsening economic climate over the period. One notable exception among commodities was wheat, which increased by more than 35%.

On the basis of total tonnage carried, ignoring duplication, the major carriers of Canada's 1982 railway freight traffic were Canadian National (36.9%) and Canadian Pacific (32.0%). The Quebec North Shore and Labrador Railway, built to transport ore and concentrates from the iron mines of the Schefferville and Wabush areas of Quebec and Labrador to water transportation facilities on the St. Lawrence River, accounted for 7.8% of the tonnage. Other individual railways carrying 1% or more were British Columbia Railway (3.1%), Ontario Northland Railways (1.9%), and Chesapeake and Ohio (1.2%).

**Passengers carried.** In 1982, more than 21.3 million revenue passengers travelled by rail. Of these VIA carried 6.2 million or 29.1%. During the previous year, there were 24.3 million rail passengers, of which 16.6 million or 68.3% were commuters. Of the 7.7 million non-commuter or intercity passengers, VIA carried 7.1 million or 92.4%. Preliminary data for 1983 show that VIA passengers numbered 6.5 million, up 5.3% from 1982.

The overall reduction of 12.3% in number of passengers from 1981 to 1982 represents a reversal of a generally rising trend from the 1973 low of 19.8 million rail passengers, of which 5.0 million or 25.5% were intercity.

## 13.4 Road transport

### 13.4.1 Highways

Every province across Canada has a network of highways, both freeways and scenic routes. Linking capitals and major cities from Victoria on Vancouver Island to St. John's in Newfoundland is the Trans-Canada Highway, completed in 1962. Branching from it west of Winnipeg and thence northwest to Prince Rupert is the Yellowhead Highway. From the two westernmost provinces the cities of the south are joined to Yukon and Northwest Territories by a

number of highways. Of these the Alaska Highway from Dawson Creek, BC to Fairbanks, Alaska is the oldest and best known. It celebrated its 40th anniversary in 1982. Crossing it at Whitehorse is the Klondike Highway from Skagway to Dawson; from there the Dempster Highway leads to Inuvik in the Mackenzie River delta. Fort Simpson and Yellowknife have access to British Columbia via the Liard Highway and to Alberta via the Mackenzie Highway. Saskatchewan's most northerly highway is the Semchuk Trail which extends in winter to the shores of Lake Athabasca. In Manitoba it is possible to go north from Winnipeg to Lynn Lake. Ontario's highway system extends as far north as Red Lake. In Quebec, a great circle extends eastward and westward from Montréal and north to Chibougamau.

In southern Canada many highways have been built between cities. At various points along the US-Canada border highways provide access to neighbouring states. One of the principal highways in Eastern Canada is the MacDonald-Cartier or 401 which extends from Windsor in southwestern Ontario to Cornwall and thence into Quebec to become the Cartier-MacDonald or Highway 20 along the south shore of the St. Lawrence River through to Rivière-du-Loup.

To complete the highway system, bridges, ferries and causeways are used to cross major waterways. A CN Marine ferry joins Port-aux-Basques in Newfoundland and North Sydney in Cape Breton; the Canso Causeway links Cape Breton Island to mainland Nova Scotia. Highways in that province are supplemented by many ferries, providing connections to Prince Edward Island, New Brunswick, Newfoundland and Maine. Along the lower St. Lawrence River and the Niagara River, international toll bridges and ferries link Ontario to New York State. Two bridges and a tunnel join Windsor and Detroit. Crossing the St. Clair River are two toll ferries and a bridge. Another bridge connects the twin cities of Sault Ste Marie, Ont. and Sault Ste Marie, Mich.

On the West Coast, ferries are used between mainland British Columbia and Vancouver Island, in coastal waters and to points on the US seaboard. They vary from the SeaBus, a commuter ferry which is part of Vancouver's urban transit system, to the Prince Rupert-Skagway ferry which is a coastal service linking the Yellowhead and Klondike highways. This ferry and others along the Inner Passage take the place of highways along the rugged shoreline. The ferry from Swartz Bay to Tsawwassen is part of the Trans-Canada Highway, and the major link between Victoria and Vancouver. To the south, the Victoria-Seattle ferry is a popular summer alternate to air or highway journeys to the west coast states.

### 13.4.2 Motor vehicles

**Registrations.** The number of vehicles registered for road use continued to rise steadily to a record

Chart 13.1  
Kilometre  
Guide

	Calgary	Charlottetown	Edmonton	Fredericton	Halifax	Montréal	Ottawa	Québec	Regina	St. John's	Saskatoon	Thunder Bay	Toronto	Vancouver	Victoria	Whitehorse	Winnipeg	Yellowknife
Calgary	●	4917	299	4558	5042	3743	3553	4014	764	6183	620	2050	3434	1057	1123	2385	1336	1811
Charlottetown	4917	●	4949	359	232	1184	1374	945	4163	1294	4421	2878	1724	5985	6051	7034	3592	6460
Edmonton	299	4949	●	4598	5082	3764	3574	4035	785	6212	528	2071	3455	1244	1310	2086	1357	1511
Fredericton	4558	359	4598	●	346	834	1024	586	3813	1622	4070	2527	1373	5634	5700	6684	3241	6109
Halifax	5042	232	5082	346	●	1318	1508	912	4297	1349	4554	3011	1857	6119	6185	7168	3726	6593
Montréal	3743	1184	3764	834	1318	●	190	270	2979	2448	3236	1693	539	4801	4867	5850	2408	5275
Ottawa	3553	1374	3574	1024	1508	190	●	460	2789	2638	3046	1503	399	4611	4677	5660	2218	5086
Québec	4014	945	4035	586	912	270	460	●	3249	2208	3507	1963	810	5071	5137	6120	2678	5546
Regina	764	4163	785	3813	4297	2979	2789	3249	●	5427	257	1286	2670	1822	1888	2871	571	2297
St. John's	6183	1294	6212	1622	1349	2448	2638	2208	5427	●	5684	4141	2987	7248	7314	8298	4855	7723
Saskatoon	620	4421	528	4070	4554	3236	3046	3507	257	5684	●	1543	2927	1677	1743	2614	829	2039
Thunder Bay	2050	2878	2071	2527	3011	1693	1503	1963	1286	4141	1543	●	1384	3108	3174	4157	715	3582
Toronto	3434	1724	3455	1373	1857	539	399	810	2670	2987	2927	1384	●	4492	4558	5528	2099	4966
Vancouver	1057	5985	1244	5634	6119	4801	4611	5071	1822	7248	1677	3108	4492	●	66	2697	2232	2411
Victoria	1123	6051	1310	5700	6185	4867	4677	5137	1888	7314	1743	3174	4558	66	●	2763	2298	2477
Whitehorse	2385	7034	2086	6684	7168	5850	5660	6120	2871	8298	2614	4157	5528	2697	2763	●	3524	2704
Winnipeg	1336	3592	1357	3241	3726	2408	2218	2678	571	4855	829	715	2099	2232	2298	3524	●	2868
Yellowknife	1811	6460	1511	6109	6593	5275	5086	5546	2297	7723	2039	3582	4966	2411	2477	2704	2868	●

## Official highway distances

14.3 million in 1982. Of that total, 73.6% were passenger cars and 23.0% were trucks and buses. Total registrations by province and territory are given in Table 13.9 and detail by type are shown in Table 13.10. Because of interprovincial differences in vehicle classification, the data are not fully comparable among the various jurisdictions.

**Motive fuel sales.** Most provinces levy taxes on motive fuels at point of sale. To estimate the amount of fuel sold for road motor vehicles, tax-exempt sales, exports and sales on which tax refunds are paid are eliminated from gross sales. A summary for the years 1978-82 is shown in Table 13.11. However, because Alberta and Saskatchewan no longer collect road fuel taxes, data are unavailable for Alberta from 1979 and for Saskatchewan from April 1, 1982.

### 13.4.3 Urban transportation

Almost 60% of all transportation activity in Canada is in urban areas, where 75% of the population lives. About 80% of all urban travel is by private automobile. Adverse public reaction to further road building and concern over energy, air pollution and congestion generated by private cars has led to new emphasis on public transit, including buses, subways and streetcars.

Although provincial and municipal governments have prime responsibility for urban transportation,

the federal government has taken some initiatives in the urban transit field. Transport Canada, in an urban research program to develop improvements to traffic management and public transport, has reviewed urban transportation services for the disabled and supported the development of a training program for urban transit personnel, a project carried out jointly with the provinces and the transit industry. A federal urban transportation assistance program (UTAP) provides the provinces with funds but does not specify their use. From April 1978 to the end of March 1983, projects selected by the provinces have included bus and equipment purchases, construction of garage and maintenance facilities, provision of bus shelters and pedestrian walkways, and grade separations.

Demand for adequate transport facilities in urban areas has placed a heavy financial burden on municipalities. Formerly, provincial cost-sharing programs which assisted in meeting the capital and operating costs of urban transportation systems were strongly oriented to freeways and roads. Several provinces are now shifting their emphasis toward transit planning and construction.

### 13.4.4 Intercity buses

In recent years buses have to a considerable extent supplanted the train for relatively short journeys by

public transportation between cities and in rural areas. In 1982 the Canadian intercity bus industry carried over 31 million passengers. Although its major services are intercity, the industry also provides some other passenger services such as school bus, charter, tour and sightseeing. Most operators carry parcels as well. Table 13.12 presents summary statistics of this industry for the period 1978-82. Especially for commuters, however, trains and other guided ground transport systems are providing fast and efficient services in large metropolitan regions such as those around Toronto, Vancouver and Calgary.

#### 13.4.5 Travel to work

Each day an estimated 6.7 million Canadians travel to work in 5.6 million automobiles, according to a November 1983 survey. At that time 1.4 million persons commuted by public transportation and 1.1 million walked or used other means of transportation such as bicycles or taxis. The pattern of commuter travel in Canada has changed only slightly in recent years. Despite substantial increases in gasoline prices since 1978, the number of commuters using public transportation increased only 6% while persons driving alone increased by 9%.

Public transit use is highest in the provinces of Quebec, Ontario and Manitoba, where higher proportions of the population live in metropolitan areas with better access to public transportation facilities. Metropolitan areas with the highest public transit use in November 1983, in terms of percent of total commuters, were Montréal (31%), Toronto (29%), and Ottawa-Hull (27%).

#### 13.4.6 Trucking

The truck is the most versatile of the goods-carrying vehicles in that it is not bound by tracks or waterways. It is as useful for door-to-door delivery in a city as for long distance haulage. Because it runs on public roads and highways its use is not confined to for-hire carriers. Firms in other industries may carry their own goods or use trucks for other operations related to their business. Thus trucking should be considered as having three components: for-hire trucking, private trucking and household goods moving.

**For-hire trucking.** In 1982 the Canadian for-hire trucking industry, excluding household goods movers and small operators, reported a gross operating revenue of \$5.6 billion, a fleet of 50,600 trucks and tractors, and some 83,000 trailers and other equipment. Transport of goods between Canadian cities alone earned an estimated \$3.1 billion, with the industry hauling about 141 million tonnes of goods. All but 15% of this total remained in the province of origin. The industry also hauled goods both between Canada and the United States, and locally within Canadian cities.

**Private trucking.** It has long been thought that carriage of goods by firms in industries other than

for-hire trucking might possibly equal the volume carried by for-hire truckers, with no accurate estimate of the actual extent. A new survey launched by Statistics Canada in 1982 attempts to delineate private trucking in Canada. It is apparent that other industries use many trucks. From the results of the 1982 and 1983 surveys, it can be estimated that they had a combined fleet of 481,000 trucks and tractors and 83,000 trailers.

In terms of reporting units, industries involved most in private trucking are construction (28%), manufacturing (18%) and wholesale trade (14%). A proportion use trucks for purposes other than goods transport, including mobile workshops, sales and on-site activities. In 1982, only 58% of reporting units and 64% of the equipment used were chiefly involved in long distance trips. This is the group that may be considered competitors of intercity for-hire trucking.

Comparing for-hire trucking with other industrial uses of trucks, the two groups are nearly equal in vehicle-related employment and expenses but not-for-hire truck users, with a total of four times the fleet, consume three times the fuel and travel nearly five times the distance as the for-hire truckers.

**Household goods movers.** In 1982 about 400 household goods movers earning more than \$100,000 gross revenue annually had total operating revenues of \$340 million; 67% was from household goods moving, 6% from other for-hire trucking and the remaining 27% from storage, warehousing, packing and subsidies. Local movers reported \$55 million in operating revenue, compared with \$285 million for intercity carriers.

### 13.5 Water transport

Because of Canada's size, geography and dependence on trade, water transport has always played a dominant role in the economic system. Historically the earliest industries developed because of convenient access to water transportation. To the present day, water transport has continued to be a relatively cheap and easy means of moving raw materials and consumer goods.

The carriage of goods and persons from one Canadian port to another is commonly known as the coasting trade. Ships engaged in this trade are said to be in coastwise or domestic shipping. In the region from Anticosti Island on the St. Lawrence River upstream to the head of the Great Lakes, the coasting trade is restricted to ships registered in Canada. All other ships require a waiver to engage in this trade, except for ships registered in a Commonwealth country which may operate from a port on the west coast of Anticosti Island to a port on the east of that island.

Except for the coasting trade, all Canadian waterways including canals, lakes and rivers are open

on equal terms to all countries, and Canadian ships must compete with foreign-flag ships.

### 13.5.1 Canadian water carriers

**Ships of Canadian registry.** Part I of the Canada Shipping Act sets out the sizes, types and ownership of vessels which must be registered. As at January 1, 1984, there were 35,622 ships with a total gross register tonnage (GRT) of 5,360,433 (equivalent to 15 179 057 m<sup>3</sup>) in the Canadian registry. Of these, 86.4% were less than 50 GRT, 9.6% from 50 to 500 GRT and only 4.0% over 500 GRT. This was an increase of 1,519 ships since 1982.

**Statistics on water transportation.** During 1982, revenues of \$1.8 billion were generated by 288 Canadian-domiciled for-hire, private, government and sightseeing marine carriers, according to the 1982 annual survey of water transportation. This survey excludes operators earning less than \$100,000 gross operating revenues in the previous year. Revenues for 1981 were \$2.1 billion for 315 carriers. The largest portion of 1982 revenues, \$1.2 billion, was generated by 191 carriers in the for-hire water transportation industry. In 1981 there were 212 for-hire carriers which generated \$1.3 billion. The water transport operations of 41 private carriers accounted for \$268.8 million in 1982 compared with \$311.7 million by 51 carriers in 1981. The 28 government carriers accounted for \$386.8 million, down from 29 carriers and \$406.1 million in 1981. Sightseeing undertakings contributed the balance of the total revenue.

The 288 carriers in 1982 employed 17,072 crew who earned wages totalling \$474.3 million. Of these totals, the 191 for-hire carriers employed 7,062 crew, with wages of \$220.1 million.

### 13.5.2 Freight movement

**Shipping traffic.** Table 13.19 shows the number and tonnage of vessels entering Canadian customs and non-customs ports, except for exclusions from the source surveys or from the tabulations. In coastwise shipping these are vessels of less than 15 net register tons (equivalent to 42 m<sup>3</sup>), Canadian naval vessels and fishing vessels. A register ton is an internationally recognized measure used to indicate the capacity of space within the hull and the enclosed spaces above the deck of a vessel. For international shipping, fishing vessels and ships not engaged in trade are excluded from the tabulations.

Freight movement through large ports includes cargoes for or from foreign countries and cargoes loaded and unloaded in the coasting trade between Canadian ports. Table 13.20 presents data by province on these freight movements. In 1982 there were 306 million tonnes loaded and unloaded at Canadian ports, compared with 356 million tonnes in 1981. Table 13.21 shows the principal commodities loaded and unloaded in international and coast-

wise shipping at 10 ports handling large cargo volumes in 1982. These ports handled 71.6% of Canada's international shipping and 45.4% of cargo loaded and unloaded in the coastwise shipping. The specific commodities shown are those transported in volume, mainly in bulk.

Many ports also have in-transit movement of vessels that pass through harbours without loading or unloading or move from one point to another within a harbour. Shipping statistics, which cover traffic in and out of both customs and non-customs ports, do not include freight in transit or freight moved from one point to another within the harbour.

### 13.5.3 Ports and harbours

Canada has 25 large deep-water ports and about 650 smaller ports and multi-purpose government wharves on the east and west coasts, along the St. Lawrence Seaway and Great Lakes, in the Arctic and on inland lakes and rivers.

Transport Canada is responsible for planning and providing adequate public port facilities to serve commercial interests and for improving or phasing out facilities in response to economic growth or changes in traffic patterns resulting from new industries, new types of ships and new developments in cargo handling. Specialized deep-water terminals for bulk commodities, particularly coal and oil, are also provided when needed under long-term full cost-recovery agreements with individual shippers. These often complement related development programs sponsored by the department of regional industrial expansion.

Transport Canada establishes and collects fees from users of port facilities. All rates assessed by ports under federal jurisdiction are subject to departmental approval. Harbour dues, cargo rates, wharfage, berthage and other charges on goods and vessels are subject to some regional and local variation.

In addition to public facilities, there are extensive wharf and associated cargo handling facilities owned by private companies, usually for handling coal, iron ore, petroleum, grain and pulpwood.

The continuing trend to larger ships has resulted in increased investment in ports for facilities farther from shore, for channel dredging, larger turning basins and more complex systems of aids to navigation and traffic control.

Increasing use of containers has brought significant changes in cargo routing and handling. Container ships travel at high speeds and port turnaround time is critical. Port facilities have to be efficient and specialized; they include special ramps for roll-on/roll-off vessels; large container cranes which can handle 20-ft (6.096 m) and 40-ft (12.192 m) containers of various heights; special container packing facilities; large open storage areas for containers, automobiles, lumber and bulk products such as coal; and facilities for loading and unloading rail cars and trucks.

### 13.5.4 Ferries

Ferries provide links between Canada's mainland and island areas. For constitutional and historical reasons, Transport Canada provides direct financial support to ferry and coastal shipping services in Eastern Canada and indirect support to a number of services in other regions.

In Eastern Canada these services are operated by CN Marine under a fixed price contract, with the government determining service levels and rates. The CN Marine services include North Sydney–Port-aux-Basques, North Sydney–Argentia, Tormentine–Borden, Digby–Saint John, Yarmouth–Bar Harbour, and the Newfoundland coastal service.

Other government-supported services in Eastern Canada include Wood Island–Caribou, Souris–Cap-aux-Meules, Montréal–Cornerbrook–St. John's and the Grand Manan ferry. The Newfoundland and Quebec governments also receive direct grants for small provincial ferry services.

On the West Coast ferries are operated by provincial Crown corporations such as British Columbia Ferry Corp. and private companies such as Canadian Pacific Ltd. Federal grants are provided to the province under arrangements similar to those with eastern provinces. The Swartz Bay–Tsawwassen ferry is subsidized as part of the Trans-Canada Highway.

Farther north the Northern Transportation Co. Ltd., a Crown corporation, operates marine transportation services on the Athabaska River and Mackenzie River, the Western Arctic Coast and in the Keewatin District of Hudson Bay.

### 13.5.5 St. Lawrence Seaway

The St. Lawrence Seaway Authority, constituted as a corporation by act of Parliament in 1951, undertook the construction (and subsequent maintenance and operation) of Canadian facilities between Montréal and Lake Erie to allow navigation by vessels of 7.9 m draft. At the same time, construction of similar facilities was undertaken by the Saint Lawrence Seaway Development Corp. of the United States. The seaway was opened to commercial traffic in April 1959 and officially inaugurated in June 1959. Included in the seaway system and under the seaway authority's jurisdiction for operation and maintenance is the Welland Canal. In June 1984 the 25th anniversary of the opening of the seaway was marked at both Cornwall, Ont. and Massena, NY.

The seaway is the world's longest canal system measuring 3 769 km from the Atlantic Ocean to the western end of Lake Superior. A vessel rises 177 m as it moves from the lower St. Lawrence River to the lakehead. Nearly 100 m of that rise occurs as it bypasses Niagara Falls. This seaway enables an ocean-going ship to penetrate North America close to mid-continent.

During its first quarter-century, the seaway together with developments in water transport

changed the size and function of a number of ports on its waters. At St. Lawrence River ports such as Port-Cartier, Montréal and Québec City, grain is unloaded from lakers and loaded on other vessels for the Atlantic crossing. The port of Toronto has declined in importance. Thunder Bay is now Canada's third largest port. Much depends on a port's ability to handle wheat and other bulk cargo speedily and efficiently.

**Seaway traffic.** Table 13.23 provides a summary of traffic statistics for the Montréal–Lake Ontario and Welland Canal sections of the seaway for 1982, with percentage variations from 1981.

### 13.5.6 Canadian Coast Guard

The coast guard fleet includes icebreakers, aid and supply vessels, search and rescue vessels, specialized vessels for ship channel maintenance and submarine cable operations; and fixed-wing aircraft and helicopters.

Through its radio stations and other communications facilities linked to domestic telephone and telex lines, the coast guard provides 24-hour, ship-to-shore safety and commercial communications, and regularly scheduled weather and navigation information broadcasts to all vessels. In some areas, particularly busy harbours, this network is supplemented by local systems which monitor and direct ship movements.

On average, more than 1,700 ships a year receive icebreaker support either singly or in convoy or are routed through the ice. Since 1970, ports in the Gulf of St. Lawrence and as far inland as Montréal on the St. Lawrence River have been accessible throughout the year. During summer some icebreakers take part in the annual Arctic resupply operations. The icebreakers escort a fleet of government-chartered tankers and dry cargo vessels which deliver the bulk petroleum, building supplies, food, clothing, furniture and other products needed by the residents of remote settlements and military installations.

Other coast guard vessels are assigned to specialized operations. On the East Coast the *John Cabot*, a cable-laying and cable repair ship, supports transatlantic cable communications. Icebreakers are used for scientific projects as well as to assist commercial shipping. These are principally hydrographic and oceanographic projects for other government departments. During the summer of 1982 the *Sir William Alexander* undertook a detailed hydrographic survey of the eastern coast of Hudson Bay and the icebreaker *Labrador* continued a hydrographic program in the high Arctic, besides assisting shipping in Lancaster Sound as required. The *Camsell*, an icebreaker out of Victoria, BC assisted shipping in the Western Arctic, calling at DEW Line sites, inspecting tide gauge stations, and helping in the reactivation of the aids to navigation at Tuktoyaktuk.

### 13.6 Expo 86

In Vancouver BC, an international exposition on transportation and communications with the theme World in Motion, World in Touch has been planned for May to October 1986. The principal site is BC Place along 52 hectares of waterfront property on the north shore of False Creek basin as a setting for exhibits from many countries and all Canadian provinces. Expo 86 is part of a year-long celebration of the 100th anniversary of the city of Vancouver.

Canada Place, at the foot of Burrard St. on the Vancouver waterfront, is the site of the Canada pavilion. The architecture is marine in theme, suggesting a prow thrusting into the sea, sails catching the wind and a liner's superstructure. Included in the complex are new cruise ship facilities, public plazas and promenades, a theatre, a hotel and a world trade centre. Connecting Canada Place and BC Place is a new advanced light rapid transit system.

#### Source

Transportation and Communications Division, Statistics Canada. Co-ordinated by June Forgie.

#### Selected References

- Air carrier operations in Canada*: fourth quarter. Statistics Canada 51-002 (quarterly), Ottawa.
- Aircraft movement statistics annual report*. Transport Canada TP 577, Ottawa.
- Canada — air transportation network*: The National Atlas of Canada, 5th edition, map. Energy, Mines and Resources Canada, Surveys and Mapping Branch, Ottawa, 1985.
- Canada — natural gas pipelines*: The National Atlas of Canada, 5th edition, map. Energy, Mines and Resources Canada, Surveys and Mapping Branch, Ottawa, 1984.
- Canada — oil pipelines*: The National Atlas of Canada, 5th edition, map. Energy, Mines and Resources Canada, Surveys and Mapping Branch, Ottawa, 1984.
- Canada — railway transportation network*: The National Atlas of Canada, 5th edition, map. Energy, Mines and Resources Canada, Surveys and Mapping Branch, Ottawa, 1984.
- Canada — road transportation network*: The National Atlas of Canada, 5th edition, map. Energy, Mines and Resources Canada, Surveys and Mapping Branch, Ottawa, 1984.
- Coastwise shipping statistics*. Statistics Canada 54-210 (annual), Ottawa.
- For-hire trucking survey*. Statistics Canada 53-224 (annual), Ottawa.
- Guide to marine transportation information sources in Canada*: 2nd edition. Transport Canada Transportation Development Centre TP 2431, Montréal, 1985.
- International seaborne shipping commodity statistics*. Statistics Canada 54-209 (annual), Ottawa.
- International seaborne shipping port statistics*. Statistics Canada 54-211 (annual), Ottawa.
- Motor carriers: freight and household goods movers*. Statistics Canada 53-222 (annual), Ottawa.
- Passenger bus and urban transit statistics*. Statistics Canada 53-215 (annual), Ottawa.
- Railway transport in Canada, commodity statistics*. Statistics Canada 52-211 (annual), Ottawa.
- Railway transport in Canada, general statistics*. Statistics Canada 52-215 (annual), Ottawa.
- Road motor vehicles: fuel sales*. Statistics Canada 53-218 (annual), Ottawa.
- Road motor vehicles: registrations*. Statistics Canada 53-219 (annual), Ottawa.
- Road transport*. Statistics Canada 53-006, Service bulletin. Ottawa.
- Statistical information on transportation available from federal and provincial governments*. Statistics Canada, Ottawa, 1984.
- Travel-log*. Statistics Canada 87-003, Ottawa. Service bulletin.
- Water transportation*. Statistics Canada 54-205 (annual), Ottawa.

## TABLES

-- not available  
 ... not appropriate or not applicable  
 -- nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

### 13.1 Aircraft movements by class of operation at airports with Transport Canada air traffic control towers, 1979-83

Operation	1979	1980	1981	1982	1983
Local operations <sup>1</sup>	3,555,510	3,367,873	3,131,486	2,522,606	2,359,868
Itinerant operations <sup>2</sup>	3,645,105	3,697,530	3,569,176	3,067,161	2,912,498
Total, movements	7,200,615	7,065,403	6,700,662	5,589,767	5,272,366
Number of towers	61	61	60	60	61

<sup>1</sup>Landings or take-offs by aircraft that remain at all times within the tower control zone.

<sup>2</sup>Landings or take-offs by aircraft that enter or leave the tower control zone.

### 13.2 Summary statistics of commercial air services, 1978-82

Item		1978	1979	1980	1981	1982
Regular scheduled services						
Departures	'000	606	646	635	624	602
Hours flown	"	645	698	726	735	728
Kilometres flown	"	321 483	353 079	373 633	384 418	379 433
Passengers carried	"	19,805	22,828	24,031	23,466	20,732
Passenger-kilometres	"	29 567 959	34 589 272	36 456 977	35 740 895	32 527 863
Goods tonne-kilometres	"	736 014	807 307	845 056	865 261	1 088 017
Goods carried	'000 t	264	283	285	290	294
Charter services						
Departures	'000	586	592	598	409	321
Hours flown	"	812	889	984	1,268	1,060
Kilometres flown	"	157 808	169 047	177 799	143 530	124 596
Passengers carried	"	3,405	3,718	3,917	3,722	3,714
Passenger-kilometres	"	8 654 132	10 308 471	10 537 045	9 792 842	10 686 238
Goods tonne-kilometres	"	89 593	98 939	89 208	..	..
Goods carried	'000 t	205	201	150	162	133
All services						
Departures	'000	1,192	1,238	1,233	1,033	923
Hours flown	"	1,457	1,587	1,710	2,003	1,788
Kilometres flown	"	479 291	522 126	551 432	527 948	504 029
Passengers carried	"	23,210	26,546	27,948	27,188	24,446
Passenger-kilometres	"	38 222 091	44 897 743	46 994 022	45 533 737	43 214 101
Goods tonne-kilometres	"	825 607	906 246	934 264	..	..
Goods carried	'000 t	469	484	435	452	427
Operating statistics <sup>1</sup>						
Fuel consumed	'000 L	3 454 424	3 870 640	3 945 931	3 845 406	3 271 319
Oil consumed	"	1 674	1 756	-1 631	1 394	1 135
Number of employees	'000	40	43	48	47	46
Salaries and wages paid	\$'000	792,148	951,409	1,124,728	1,278,580	1,372,892
Financial statistics <sup>1</sup>						
Operating revenues	"	2,583,347	3,135,653	3,845,706	4,433,821	4,466,691
Operating expenses	"	2,420,473	2,969,441	3,655,314	4,286,112	4,485,912
Interest expenses	"	96,742	116,881	139,065	209,858	226,055

<sup>1</sup>Includes specialty flying such as flying training, aerial photography, crop dusting, etc.

## 13.3 Canadian air services by area of operation, 1981 and 1982

Year and item		Domestic services	Transborder services	Transatlantic services	Pacific services	Other international services
1981						
Regular scheduled services						
Departures	'000	566	43	9	2	5
Hours flown	"	571	87	49	11	17
Kilometres flown	"	273 760	52 480	37 260	8 548	12 370
Passengers carried	"	18,465	3,234	1,048	240	478
Passenger-kilometres	"	20 550 168	5 137 840	6 404 716	2 001 815	1 646 357
Goods tonne-kilometres	"	361 395	84 755	309 220	82 735	27 155
Goods carried	'000 kg	191 950	35 237	45 186	10 777	7 123
Charter services						
Departures	'000	382	18	4	—	5
Hours flown	"	1,140	51	21	—	56
Kilometres flown	"	91 065	—	15 515	202	10 107
Passengers carried	"	1,195	1,396	686	38	408
Passenger-kilometres	"	741 399	3 517 415	4 172 579	46 415	1 315 035
Goods tonne-kilometres	"	—	—	—	—	—
Goods carried	'000 kg	150 191	2 467	1 823	—	7 596
1982						
Regular scheduled services						
Departures	'000	549	39	9	2	4
Hours flown	"	575	79	48	11	14
Kilometres flown	"	274 311	48 287	37 095	9 326	10 413
Passengers carried	"	16,262	2,787	1,016	254	413
Passenger-kilometres	"	18 308 162	4 460 093	6 216 244	2 098 335	1 445 028
Goods tonne-kilometres	"	564 989	87 489	314 629	93 200	27 711
Goods carried	'000 kg	195 402	35 817	44 876	11 574	6 717
Charter services						
Departures	'000	292	19	5	—	4
Hours flown	"	924	62	26	—	48
Kilometres flown	"	72 419	27 060	17 297	—	7 820
Passengers carried	"	966	1,495	868	—	386
Passenger-kilometres	"	1 125 213	3 856 574	4 654 957	—	1 049 493
Goods tonne-kilometres	"	—	—	—	—	—
Goods carried	'000 kg	124 656	3 140	754	—	4 701

## 13.4 Railway track kilometres operated, 1900-82

First main <sup>1</sup>	track	Area and type of track	1978 <sup>2</sup>	1979	1980	1981 <sup>2</sup>	1982 <sup>3</sup>
Year	km						
1900	28 416	First main					
1905	32 971	Newfoundland	1 458	1 517	1 517	1 458	..
1910	39 801	Prince Edward Island	407	407	407	407	..
1915	56 137	Nova Scotia	1 968	1 968	1 968	1 968	..
1920	62 451	New Brunswick	2 632	2 630	2 628	2 628	..
1925	64 937	Quebec	8 372	8 372	8 322	8 322	..
1930	67 668	Ontario	15 701	15 755	15 501	15 366	..
1935	69 067	Manitoba	6 640	6 631	6 563	6 431	..
1940	68 502	Saskatchewan	12 839	12 666	12 493	12 386	..
1945	68 159	Alberta	9 443	9 460	9 384	9 270	..
1950 <sup>4</sup>	69 168	British Columbia	7 540	7 382	7 345	7 292	..
1955	69 916	Yukon	..	93	93	..	..
1960	70 858	Northwest Territories	209	209	209	209	..
1965	69 454	United States	637	637	636	636	..
1970	70 784						
1975	70 716	Total, first main	67 890	67 725	67 066	66 371	..
1976	70 471						
1977	69 967	All other	26 195	26 326	26 295	26 042	..
1978	67 890						
1979	67 725						
1980	67 066						
1981	66 371						
1982 <sup>3</sup>	65 819	Total	94 085	94 051	93 361	92 413	..

<sup>1</sup>Defined as a single track extending the entire distance between terminals, upon which the length of the road is based.

<sup>2</sup>Excludes the statistics of White Pass and Yukon Route Railway.

<sup>3</sup>Starting with 1982 data, the reporting requirements for first main track were replaced with new requirements for mainline track. Major criteria for mainline designation are: 2 million gross ton miles per track mile; part of the transcontinental system; a vital export-import link, and connecting lines. One consequence of the revised reporting is that netting out of track used by more than one respondent is no longer possible. The 1982 figure for first main track is an estimate based on additions and retirements. New statistical series will begin with 1982 data in future issues of the Canada Year Book.

<sup>4</sup>Newfoundland included from 1950.

### 13.5 Railway rolling-stock in service as at Dec. 31, 1978-82<sup>1</sup>

Type	1978 <sup>1</sup>	1979	1980	1981	1982 <sup>2</sup>
Locomotives	3,923	4,096	4,167	4,154	..
Steam	—	—	—	—	..
Diesel	3,909	4,082	4,153	4,140	..
Electric	14	14	14	14	..
Passenger cars	520	1,596	1,580	1,405	..
Turbo train	—	6	6	6	..
Power unit cars	—	15	15	15	..
Coach	—	6	6	6	..
Parlour	—	115	100	100	..
Self-propelled cars	24	800	794	734	..
Coach	418	49	38	58	..
Combination	12	206	241	167	..
Meal service and lounge	6	241	215	183	..
Sleeping	2	135	162	103	..
Baggage car	54	23	3	33	..
Other	4	—	—	—	..
Freight cars	182,138	180,089	179,139	179,105	..
Automobile, multi-level flat	3,570	3,747	3,532	3,492	..
Ballast	2,530	2,531	2,471	2,419	..
Box	80,676	79,302	77,079	73,635	..
Flat	24,562	24,785	25,421	25,439	..
Gondola	19,773	19,333	18,916	19,218	..
Hopper	32,672	33,666	35,422	39,331	..
Ore	8,551	7,754	7,906	7,613	..
Refrigerator	4,591	4,042	3,674	3,577	..
Stock	1,734	1,520	1,347	1,077	..
Tank	268	262	248	263	..
Other	3,211	3,147	3,123	3,041	..

<sup>1</sup>Passenger car data incomplete as a result of the transfer of passenger services to VIA Rail in November 1978.

<sup>2</sup>Starting with 1982 data, new reporting definitions for railway rolling-stock are in effect. Consequently, data are not comparable with those of previous years. Furthermore, some previously-reported types are no longer identifiable. A new statistical series will begin with 1982 data in future issues of the Canada Year Book.

### 13.6 Commodities<sup>1</sup> hauled as revenue freight by railways, 1978-82 (thousand tonnes)

Commodity	1978	1979	1980	1981	1982
LIVE ANIMALS	107	100	114	63	89
Cattle	100	93	108	61	88
Other live animals	7	7	6	2	1
FOOD, FEED, BEVERAGES AND TOBACCO	33 105	31 910	35 698	35 521	39 594
Meat, fresh or frozen	186	175	160	127	103
Other animal products	156	171	185	171	124
Barley	5 283	6 252	4 174	6 252	7 116
Wheat	18 153	15 743	21 512	20 273	24 643
Other grains	1 758	2 021	2 241	2 284	2 122
Milled cereals and cereal products	1 877	1 910	1 667	1 557	1 249
Fruits and fruit preparations	530	488	535	476	368
Vegetables and vegetable preparations	1 001	888	897	861	784
Sugar	374	349	298	251	263
Other food and food preparations	788	779	740	693	646
Animal feed	2 743	2 836	2 987	2 376	2 032
Beverages	225	261	274	195	143
Tobacco and tobacco products	31	37	28	5	1
CRUDE MATERIALS, INEDIBLE	117 374	137 076	134 259	128 161	102 558
Crude animal and vegetable materials	2 354	3 321	2 521	2 237	2 153
Pulpwood (logs and chips)	12 248	12 539	12 588	11 169	10 008
Other crude wood materials	2 765	2 383	2 778	1 870	1 148
Textile fibres	109	121	117	96	73
Iron ore	42 595	62 343	54 168	49 788	35 452
Nickel-copper ore	3 478	2 626	4 983	4 457	1 890
Bauxite ore and alumina	2 682	1 973	2 752	3 134	2 793
Other metallic ores	5 337	4 647	4 627	4 516	4 014
Scrap metal, slags and drosses	2 019	2 239	2 319	2 030	1 259
Coal	21 127	20 950	22 806	24 292	24 673
Crude oil and bituminous substances	306	314	177	167	97
Gypsum	4 876	4 905	4 652	4 767	3 850
Limestone	3 920	4 126	4 132	4 438	3 226

**13.6 Commodities<sup>1</sup> hauled as revenue freight by railways, 1978-82 (thousand tonnes) (concluded)**

Commodity	1978	1979	1980	1981	1982
Other crude non-metallic minerals	12 689	13 704	14 795	14 331	11 285
Waste materials	869	885	844	869	637
<b>FABRICATED MATERIALS, INEDIBLE</b>	<b>67 048</b>	<b>68 190</b>	<b>66 253</b>	<b>65 237</b>	<b>54 959</b>
Lumber	8 500	7 739	6 787	6 385	6 368
Other wood fabricated materials	1 989	1 950	1 748	1 552	1 073
Wood pulp and other pulp	5 575	5 597	5 795	5 589	5 144
Newsprint	4 647	4 607	4 428	4 456	4 094
Other paper and paperboard	3 392	3 640	3 607	3 461	2 770
Chemicals	6 305	6 747	8 175	8 290	7 231
Potash	9 690	10 560	10 652	9 703	7 681
Other fertilizers	2 676	2 690	2 552	2 370	1 894
Petroleum and coal products	11 670	11 495	10 802	10 933	9 810
Metals and primary metal products	5 999	6 437	5 815	6 884	4 636
Cement	2 006	1 889	1 763	1 804	1 348
Other fabricated materials	4 599	4 839	4 129	3 810	2 910
<b>END PRODUCTS, INEDIBLE</b>	<b>8 934</b>	<b>8 706</b>	<b>7 349</b>	<b>6 745</b>	<b>5 018</b>
Road motor vehicles and parts	5 620	5 086	4 211	4 020	3 353
Other end products	3 314	3 620	3 138	2 725	1 665
<b>SPECIAL TYPES OF TRAFFIC</b>	<b>11 368</b>	<b>11 209</b>	<b>10 227</b>	<b>10 700</b>	<b>9 938</b>
Piggyback (trailers and containers) <sup>2</sup>	7 131	6 624	6 331	7 496	7 002
Freight forwarded	1 735	1 749	1 501	1 355	1 177
Other special traffic	2 502	2 836	2 395	1 849	1 759
<b>NON-CARLOAD SHIPMENTS<sup>3</sup></b>	<b>889</b>	<b>681</b>	<b>549</b>	<b>493</b>	<b>618</b>
<b>Total</b>	<b>238 824</b>	<b>257 874</b>	<b>254 447</b>	<b>246 918</b>	<b>212 774</b>

<sup>1</sup>In this table duplications are eliminated, for example, freight that is interlined between two or more Canadian railways is counted only once. The statistics do not cover US operations of Canadian railways except for the Canadian Pacific Railway line through Maine, US, and certain other short mileages which are deemed to be an integral part of the Canadian railway system. Sections of US railways operating into Canada are regarded as Canadian railways and are included. Freight carried by the Cartier Railway is included in this table; however, financial data for this railway are not available for inclusion in the financial tables.

<sup>2</sup>Excludes traffic moved in railway-operated containers and trailers.

<sup>3</sup>Includes express-rated traffic.

**13.7 Railway operating revenues and expenses (Canadian operations), 1978-82**

Item and year	Total revenues \$'000	Total expenses \$'000	Per km of first main track			Average freight revenue per freight-train km \$
			Revenues \$	Expenses \$	Net revenues \$	
<b>All railways</b>						
1978	3,882,293	3,675,368	57,185	54,137	3,048	29.36
1979	4,752,424	4,411,981	70,172	65,146	5,027	33.27
1980	5,333,841	5,003,009	79,531	74,598	4,933	37.72
1981	6,144,610	5,742,174	92,579	86,516	6,063	43.98
1982	6,301,314	6,185,161 <sup>1</sup>	2	2	2	49.62
<b>CNR</b>						
1978	2,078,549	1,977,266	58,605	55,749	2,856	28.18
1979	2,388,982	2,193,043	67,715	62,161	5,554	33.00
1980	2,648,198	2,461,006	76,032	70,657	5,374	37.96
1981	3,066,774	2,809,215	84,831	77,707	7,124	44.61
1982	2,991,944	3,090,674	2	2	2	49.43
<b>CPR</b>						
1978	1,408,962	1,302,094	56,621	52,327	4,295	29.77
1979	1,597,103	1,456,066	64,874	59,145	5,729	32.55
1980	1,757,727	1,619,299	72,008	66,337	5,671	36.21
1981	2,052,577	1,903,222	85,230	79,028	6,202	41.58
1982	2,134,336	1,904,050 <sup>1</sup>	2	2	2	45.48

<sup>1</sup>Does not include provisions for income tax.

<sup>2</sup>Beginning with 1982, first main track data are no longer available; therefore this ratio could not be calculated.

**13.8 Expenditures on highway, road, street and bridge construction, 1978-83<sup>1</sup>** (million dollars)

Year and province or territory	Federal and provincial governments		Municipal governments		All other sectors		Total
	New	Repair	New	Repair	New	Repair	
<b>1978</b>							
Newfoundland	71.7	12.0	6.4	0.1	3.7	0.7	94.6
Prince Edward Island	15.2	9.5	0.3	—	1.1	—	26.1
Nova Scotia	67.7	20.3	17.9	0.5	5.3	2.6	114.3
New Brunswick	91.0	8.0	12.6	1.4	5.9	1.5	120.4
Quebec	398.8	100.0	153.7	9.1	11.6	16.3	689.5
Ontario	379.2	47.5	271.8	52.0	80.0	17.4	847.9
Manitoba	75.7	6.0	39.5	4.6	11.9	2.9	140.6
Saskatchewan	101.9	32.5	29.3	7.1	10.7	3.1	184.6
Alberta	203.1	41.7	118.9	20.5	42.5	7.7	434.4
British Columbia	205.0	93.6	55.4	8.2	113.0	32.8	508.0
Yukon and Northwest Territories	32.9	9.0	2.2	—	—	0.4	44.5
<b>Canada</b>	<b>1,642.2</b>	<b>380.1</b>	<b>708.0</b>	<b>103.5</b>	<b>285.9</b>	<b>85.3</b>	<b>3,205.0</b>
<b>1979</b>							
Newfoundland	101.0	16.0	6.4	0.1	4.4	0.8	128.7
Prince Edward Island	18.9	10.2	0.3	0.1	1.0	—	30.5
Nova Scotia	77.0	25.1	6.6	0.6	4.9	2.9	117.1
New Brunswick	90.5	7.9	16.9	3.9	7.7	1.9	128.8
Quebec	416.4	140.4	159.2	9.9	24.4	26.6	776.9
Ontario	427.6	51.5	277.3	56.2	89.8	22.6	925.0
Manitoba	84.0	6.3	26.7	5.5	9.1	4.9	136.5
Saskatchewan	110.2	31.2	47.6	8.8	13.0	4.5	215.3
Alberta	163.9	111.2	177.0	23.3	48.6	6.5	530.5
British Columbia	218.9	108.2	64.2	8.9	140.6	37.2	578.0
Yukon and Northwest Territories	41.8	8.3	4.3	0.1	0.9	0.3	55.7
<b>Canada</b>	<b>1,750.2</b>	<b>516.3</b>	<b>786.5</b>	<b>117.4</b>	<b>344.4</b>	<b>108.2</b>	<b>3,623.0</b>
<b>1980</b>							
Newfoundland	62.5	19.7	11.1	0.1	5.8	0.9	100.1
Prince Edward Island	27.0	12.2	0.4	0.2	0.6	0.1	40.5
Nova Scotia	51.0	48.0	7.4	0.2	4.9	3.8	115.3
New Brunswick	91.3	8.7	11.4	4.2	8.4	1.8	125.8
Quebec	400.7	159.7	244.1	10.9	29.6	27.4	872.4
Ontario	479.1	58.8	302.1	56.4	71.6	24.7	992.7
Manitoba	92.5	20.2	33.7	5.4	8.0	3.6	163.4
Saskatchewan	93.3	20.5	55.3	8.9	10.7	3.9	192.6
Alberta	177.8	167.1	189.9	28.4	49.1	8.6	620.9
British Columbia	246.2	113.1	78.5	10.8	188.1	53.1	689.8
Yukon and Northwest Territories	39.3	10.3	3.5	0.1	15.7	0.3	69.2
<b>Canada</b>	<b>1,760.7</b>	<b>638.3</b>	<b>937.4</b>	<b>125.6</b>	<b>392.5</b>	<b>128.2</b>	<b>3,982.7</b>
<b>1981</b>							
Newfoundland	49.2	24.9	12.4	0.1	6.6	0.5	93.7
Prince Edward Island	21.4	12.7	0.2	0.5	0.4	—	35.2
Nova Scotia	67.8	44.3	7.6	0.3	8.9	3.7	132.6
New Brunswick	93.3	7.6	10.8	5.0	5.6	2.5	124.8
Quebec	397.5	93.8	170.6	13.9	30.2	27.5	733.5
Ontario	519.7	62.2	374.1	71.0	92.1	21.9	1,141.0
Manitoba	102.4	31.7	35.1	5.7	14.7	3.4	193.0
Saskatchewan	103.3	20.4	62.1	9.6	12.9	3.9	212.2
Alberta	360.5	181.4	245.0	44.7	54.6	12.0	898.2
British Columbia	245.3	106.3	84.6	8.2	190.3	49.7	684.4
Yukon and Northwest Territories	46.2	11.1	2.4	—	16.8	0.4	76.9
<b>Canada</b>	<b>2,006.6</b>	<b>596.4</b>	<b>1,004.9</b>	<b>159.0</b>	<b>433.1</b>	<b>125.5</b>	<b>4,325.5</b>
<b>1982</b>							
Newfoundland	81.1	10.8	19.8	0.1	4.8	0.8	117.4
Prince Edward Island	28.1	12.3	0.3	0.5	0.3	0.1	41.6
Nova Scotia	76.6	79.9	7.7	0.7	9.1	2.7	176.7
New Brunswick	109.0	29.1	11.1	5.3	7.5	2.8	164.8
Quebec	380.8	89.4	160.1	26.9	23.6	28.4	709.2
Ontario	585.0	64.4	390.1	82.5	61.8	19.7	1,203.5
Manitoba	105.9	46.8	28.6	5.9	8.6	3.4	199.2
Saskatchewan	83.3	19.2	67.3	8.9	9.9	4.4	193.0
Alberta	427.7	218.4	267.6	37.3	40.2	9.6	1,000.8
British Columbia	186.3	116.8	90.7	9.3	165.0	45.6	613.7
Yukon and Northwest Territories	51.0	31.9	3.4	0.1	10.8	0.4	97.6
<b>Canada</b>	<b>2,114.8</b>	<b>719.0</b>	<b>1,046.7</b>	<b>177.5</b>	<b>341.6</b>	<b>117.9</b>	<b>4,517.5</b>

### 13.8 Expenditures on highway, road, street and bridge construction, 1978-83<sup>1</sup> (million dollars) (concluded)

Year and province or territory	Federal and provincial governments		Municipal governments		All other sectors		Total
	New	Repair	New	Repair	New	Repair	
1983							
Newfoundland	90.8	17.2	19.8	0.1	4.9	0.9	133.7
Prince Edward Island	15.0	10.7	0.3	0.5	0.3	0.1	26.9
Nova Scotia	81.8	71.2	10.0	0.7	8.3	2.9	174.9
New Brunswick	103.8	30.8	10.8	5.3	6.5	2.9	160.1
Quebec	387.0	96.6	170.2	27.0	22.8	22.4	726.0
Ontario	571.8	63.5	430.4	91.1	56.3	21.6	1,234.7
Manitoba	105.9	48.8	42.1	6.2	7.4	3.6	214.0
Saskatchewan	103.7	27.4	64.8	9.5	9.1	4.9	219.4
Alberta	398.0	206.2	215.8	22.7	39.4	10.4	892.5
British Columbia	202.5	114.7	102.1	9.7	158.4	53.1	640.5
Yukon and Northwest Territories	56.1	34.5	4.0	0.1	6.2	0.4	101.3
Canada	2,116.4	721.6	1,070.3	172.9	319.6	123.2	4,524.0

<sup>1</sup> Actual 1978-81; preliminary 1982; intentions 1983.

### 13.9 Motor vehicles registered for road use, by province, 1978-82

Province or territory	1978	1979	1980	1981	1982
Newfoundland	188,357	197,670	212,198	209,482	190,514
Prince Edward Island	65,501	68,361	68,750	68,396	68,220
Nova Scotia	413,034	457,905	530,018	515,689	535,372
New Brunswick	340,777	356,267	364,236	365,951	372,796
Quebec	3,042,726	3,150,580	3,187,433	2,878,827	2,826,150
Ontario	4,496,105	4,645,706	4,647,820	5,057,801	5,066,195
Manitoba	628,427	645,552	656,435	662,407	670,329
Saskatchewan	722,643	682,881	683,955	692,023	687,474
Alberta	1,413,173	1,530,118	1,659,079	1,748,918	1,787,751
British Columbia	1,633,739	1,569,866	1,672,575	1,616,614	2,074,530
Yukon	15,625	17,665	18,333	18,119	19,112
Northwest Territories	15,342	16,129	16,320	17,255	18,274
Canada	12,975,449	13,338,700	13,717,152	13,851,482	14,310,717

### 13.10 Types of motor vehicles registered, by province, 1978-82

Year, province or territory	Passenger cars <sup>1</sup>	Trucks and buses <sup>2</sup>	Motorcycles and mopeds	Other <sup>3</sup>	Total
1978					
Newfoundland	132,449	45,362	3,358	5,993	188,357
Prince Edward Island	46,413	16,887	1,777	—	65,501
Nova Scotia	284,559	108,913	14,256	4,345	413,034
New Brunswick	243,301	76,713	10,903	8,446	340,777
Quebec	2,449,668	372,346	162,820	40,898	3,042,726
Ontario	3,597,371	783,032	95,888	—	4,496,105
Manitoba	445,546	166,041	15,594	897	628,427
Saskatchewan	395,089	306,712	14,792	870	722,643
Alberta	960,284	405,679	40,644	—	1,413,173
British Columbia	1,176,883	420,724	36,132	—	1,633,739
Yukon	7,411	7,546	668	—	15,625
Northwest Territories	6,020	7,877	1,321	55	15,342
Canada	9,744,994	2,717,832	398,153	61,504	12,975,449

**13.10 Types of motor vehicles registered, by province, 1978-82 (concluded)**

Year, province or territory	Passenger cars <sup>1</sup>	Trucks and buses <sup>2</sup>	Motorcycles and mopeds	Other <sup>3</sup>	Total
1979					
Newfoundland	140,394	53,305	3,971	—	197,670
Prince Edward Island	47,632	18,498	1,809	—	68,361
Nova Scotia	316,257	123,325	16,332	682	457,905
New Brunswick	250,388	84,964	10,869	9,720	356,267
Quebec	2,568,665	373,768	145,703	45,251	3,150,580
Ontario	3,690,837	834,284	98,983	—	4,645,706
Manitoba	452,984	175,830	15,653	743	645,552
Saskatchewan	366,164	298,652	12,464	809	682,881
Alberta	1,040,277	438,302	44,712	—	1,530,118
British Columbia	1,098,821	434,185	36,860	—	1,569,866
Yukon	6,660	10,385	620	—	17,665
Northwest Territories	6,067	8,719	1,081	148	16,129
Canada	9,985,146	2,854,217	389,057	57,353	13,338,700
1980					
Newfoundland	146,821	60,521	4,856	—	212,198
Prince Edward Island	47,608	19,425	1,717	—	68,750
Nova Scotia	364,416	145,827	19,071	704	530,018
New Brunswick	252,915	91,421	11,315	8,585	364,236
Quebec	2,547,500	412,509	188,200	39,224	3,187,433
Ontario	3,708,694	833,510	105,616	—	4,647,820
Manitoba	458,457	180,505	16,678	795	656,435
Saskatchewan	393,205	277,877	12,095	778	683,955
Alberta	1,141,905	464,315	52,863	—	1,659,079
British Columbia	1,181,147	449,210	42,218	—	1,672,575
Yukon	6,778	10,975	580	—	18,333
Northwest Territories	6,069	9,204	978	69	16,320
Canada	10,255,511	2,955,299	456,187	50,155	13,717,152
1981					
Newfoundland	141,607	62,311	5,564	—	209,482
Prince Edward Island	48,564	17,826	1,888	118	68,396
Nova Scotia	350,407	144,465	20,139	678	515,689
New Brunswick	251,511	91,684	12,260	10,496	365,951
Quebec	2,378,851	337,759	161,279	938	2,878,827
Ontario	3,831,058	1,112,341	114,402	—	5,057,801
Manitoba	460,501	184,486	16,678	742	662,407
Saskatchewan	391,743	287,301	12,363	616	692,023
Alberta	1,216,340	476,938	55,640	—	1,748,918
British Columbia	1,115,959	456,206	44,449	—	1,616,614
Yukon	6,702	10,837	580	—	18,119
Northwest Territories	6,145	10,043	1,021	46	17,255
Canada	10,199,388	3,192,197	446,263	13,634	13,851,482
1982					
Newfoundland	129,387	56,440	4,687	—	190,514
Prince Edward Island	48,177	17,815	2,104	124	68,220
Nova Scotia	363,883	149,220	21,524	745	535,372
New Brunswick	249,819	100,219	12,255	10,503	372,796
Quebec	2,376,745	309,575	138,825	1,005	2,826,150
Ontario	3,842,743	1,091,362	126,090	—	5,060,195
Manitoba	464,916	187,220	17,461	732	670,329
Saskatchewan	375,165	299,389	12,269	651	687,474
Alberta	1,259,791	468,062	59,898	—	1,787,751
British Columbia	1,406,370	591,925	76,235	—	2,074,530
Yukon	6,879	11,524	709	—	19,112
Northwest Territories	6,480	10,655	1,082	57	18,274
Canada	10,530,355	3,293,406	473,139	13,817	14,310,717

<sup>1</sup>Includes taxis and rent-a-car.<sup>2</sup>Includes other types of motor vehicles, in certain provinces or territories, while certain classes of trucks and/or buses have been included under passenger cars in five provinces.<sup>3</sup>Includes ambulances, fire trucks and some government vehicles.

**13.11 Sales of motive fuels, by province, 1978-82 (thousand litres)**

Province or territory	1978	1979	1980	1981	1982
Gasoline					
Newfoundland	599 702	621 098	620 629	587 102	554 494
Prince Edward Island	183 994	193 763	186 148	171 334	160 443
Nova Scotia	1 176 487	1 202 278	1 190 639	1 141 143	1 064 328
New Brunswick	1 063 825	1 108 873	1 124 765	1 070 849	984 738
Quebec	8 683 182	8 673 387	8 578 685	8 104 580	7 069 814
Ontario	12 611 068	13 021 688	13 013 890	12 610 161	11 575 917
Manitoba	1 422 748	1 429 473	1 395 781	1 323 693	1 260 096
Saskatchewan	1 472 838	1 526 060	1 531 037	1 460 263	414 474 <sup>1</sup>
Alberta	1 175 166				
British Columbia	3 800 706	3 984 520	4 168 703	4 224 698	3 808 971
Yukon	51 657	51 996	54 270	57 873	51 335
Northwest Territories	31 584	33 640	33 500	30 805	44 443
Total, net sales	32 272 957	31 846 777	31 898 047	30 782 502	26 989 053
Total, gross sales	36 909 196	38 319 444 <sup>2</sup>	38 037 382 <sup>2</sup>	36 896 458 <sup>2</sup>	32 583 705 <sup>2</sup>
Diesel oil					
Total, net sales	4 800 552	5 171 936	5 250 593	5 269 933	3 854 655
Liquefied petroleum gases					
Total, net sales	26 513	20 030	20 286	20 203	22 076

<sup>1</sup>This figure represents 1982 sales up to April 1, 1982 when Saskatchewan removed road tax.

<sup>2</sup>Includes Alberta gross sales.

**13.12 Canadian intercity bus industry, 1978-82**

Year and item		Class 1 and 2 (\$500,000 and over)	Class 3 (\$100,000- 499,999)	Class 4, 5 and unknown (under \$100,000)	Total, all classes
1978					
Establishments reporting	No.	22	12	28	62
Total operating revenue	\$'000	224,632	3,044	1,588	229,265
Number of employees (including working owners)	No.	5,308	166	87	5,561
Equipment operated					
Highway buses	"	1,286	62	43	1,391
Urban and suburban buses	"	391	6	12	409
School buses	"	62	73	7	142
Other equipment	"	—	5	2	7
Total, equipment	"	1,739	146	64	1,949
Fare passengers carried	'000	32,506	553	..	33,059
Total vehicle-kilometres travelled	'000	187 789	3 472	..	191 261
1979					
Establishments reporting	No.	21	14	24	59
Total operating revenue	\$'000	229,202	2,952	1,210	233,364
Number of employees (including working owners)	No.	5,643	134	59	5,827
Equipment operated					
Highway buses	"	1,339	66	30	1,435
Urban and suburban buses	"	387	3	6	396
School buses	"	56	14	8	78
Other equipment	"	1	—	3	4
Total, equipment	"	1,783	83	47	1,913
Fare passengers carried	'000	33,043	681	..	33,724
Total vehicle-kilometres travelled	'000	186 341	3 632	..	189 973

**13.12 Canadian intercity bus industry, 1978-82 (concluded)**

Year and item		Class 1 and 2 (\$500,000 and over)	Class 3 (\$100,000- 499,999)	Class 4, 5 and unknown (under \$100,000)	Total, all classes
1980					
Establishments reporting	No.	19	15	20	54
Total operating revenue	\$'000	265,607	3,946	885	270,438
Number of employees (including working owners)	No.	5,612	150	54	5,816
Equipment operated					
Highway buses	"	1,329	78	17	1,424
Urban and suburban buses	"	337	5	6	348
School buses	"	33	20	9	62
Other equipment	"	2	1	5	8
Total, equipment	"	1,701	104	37	1,842
Fare passengers carried	'000	32,846	437	—	33,282
Total vehicle-kilometres travelled	'000	199 496	3 623	—	203 119
1981					
Establishments reporting	No.	19	12	19	50
Total operating revenue	\$'000	273,623	2,882	871	277,377
Number of employees (including working owners)	No.	5,372	81	38	5,491
Equipment operated					
Highway buses	"	1,363	42	13	1,418
Urban and suburban buses	"	242	7	8	257
School buses	"	35	11	1	47
Other equipment	"	2	2	7	11
Total, equipment	"	1,642	62	29	1,733
Fare passengers carried	'000	29,215	370	—	29,585
Total vehicle-kilometres travelled	'000	182 843	2 171	—	185 014
1982					
Establishments reporting	No.	20	12	—	32
Total operating revenue	\$'000	323,513	3,829	—	327,342
Number of employees (including working owners)	No.	5,584	108	—	5,692
Equipment operated					
Highway buses	"	1,346	25	—	1,371
Urban and suburban buses	"	225	21	—	246
School buses	"	39	20	—	59
Other equipment	"	1	6	—	7
Total, equipment	"	1,611	72	—	1,683
Fare passengers carried	'000	29,772	1,415	—	31,187
Total vehicle-kilometres travelled	'000	195 104	2 734	—	197 838

**13.13 Canadian urban transit industry, 1978-82**

Year and item		Class 1 and 2 (\$500,000 and over)	Class 3 (\$100,000- 499,999)	Class 4, 5 and unknown (under \$100,000)	Total, all classes
1978					
Establishments reporting	No.	60	10	8	78
Total operating revenue	\$'000	845,196	2,770	420	848,386
Number of employees (including working owners)	No.	30,392	143	36	30,571
Equipment operated					
Highway buses	"	66	5	3	74
Urban and suburban buses	"	9,126	66	16	9,208
School buses	"	251	3	3	257
Other equipment	"	2,285	11	—	2,296
Total, equipment	"	11,728	85	22	11,835
Fare passengers carried	'000	1,239,341	4,285	..	1,243,599
Total, vehicle kilometres	'000	622 890	4 695	..	627 585

13.13 Canadian urban transit industry, 1978-82 (concluded)

Year and item		Class 1 and 2 (\$500,000 and over)	Class 3 (\$100,000- 499,999)	Class 4, 5 and unknown (under \$100,000)	Total, all classes
1979					
Establishments reporting	No.	62	9	8	79
Total operating revenue	\$'000	915,768	2,818	434	919,020
Number of employees (including working owners)	No.	31,237	148	38	31,423
Equipment operated					
Highway buses	"	69	4	3	76
Urban and suburban buses	"	9,386	57	11	9,454
School buses	"	317	12	12	341
Other equipment	"	2,367	8	—	2,375
Total, equipment	"	12,139	81	26	12,246
Fare passengers carried	'000	1,213,583	3,052	..	1,216,635
Total, vehicle kilometres	'000	619 019	2 708	..	621 727
1980					
Establishments reporting	No.	60	9	7	76
Total operating revenue	\$'000	1,060,569	3,270	378	1,064,217
Number of employees (including working owners)	No.	32,558	139	22	32,719
Equipment operated					
Highway buses	"	95	3	—	98
Urban and suburban buses	"	9,778	55	11	9,844
School buses	"	315	12	4	331
Other equipment	"	2,404	8	—	2,412
Total, equipment	"	12,592	78	15	12,865
Fare passengers carried	'000	1,304,309	2,890	—	1,307,199
Total, vehicle kilometres	'000	653 277	2 968	—	656 245
1981					
Establishments reporting	No.	60	9	6	75
Total operating revenue	\$'000	1,298,638	3,451	756	1,302,845
Number of employees (including working owners)	No.	33,362	139	37	33,538
Equipment operated					
Highway buses	"	65	4	—	69
Urban and suburban buses	"	10,019	54	13	10,086
School buses	"	212	17	8	237
Other equipment	"	2,485	—	1	2,486
Total, equipment	"	12,781	75	22	12,878
Fare passengers carried	'000	1,367,121	1,749	—	1,368,870
Total, vehicle kilometres	'000	696 255	2 603	—	698 858
1982					
Establishments reporting	No.	63	10	—	73
Total operating revenue	\$'000	1,465,327	4,644	—	1,469,971
Number of employees (including working owners)	No.	33,822	149	—	33,971
Equipment operated					
Highway buses	"	149	7	—	156
Urban and suburban buses	"	10,377	50	—	10,427
School buses	"	212	38	—	250
Other equipment	"	2,485	—	—	2,485
Total, equipment	"	13,223	95	—	13,318
Fare passengers carried	'000	1,331,650	1,471	—	1,333,121
Total, vehicle kilometres	'000	710 437	1 877	—	712 314

**13.14 Commodities transported by motor carriers, by mass, 1977-82 (thousand tonnes)**

Commodity	1977	1978	1979	1980	1981	1982
<b>LIVE ANIMALS</b>	1 435	1 708	1 713	2 123	1 823	1 759
<b>FOOD, FEED, BEVERAGES AND TOBACCO</b>	16 442	15 135	17 484	20 674	22 133	22 631
Meat, poultry and fish	882	968	1 195	1 289	1 045	1 236
Dairy products	2 390	3 183	4 041	5 989	4 509	5 003
Grains	1 434	1 851	1 629	2 215	3 346	2 814
Milled cereals and cereal products	797	558	698	716	973	567
Fruits, vegetables and nuts	1 725	1 849	1 702	1 545	2 169	2 365
Other food and food preparations	5 557	3 161	4 137	5 778	5 706	5 864
Animal feed	1 315	936	1 452	989	1 402	1 844
Beverages	2 061	2 456	2 286	1 802	2 633	2 692
Tobacco and tobacco products	281	173	344	351	350	246
<b>CRUDE MATERIALS, INEDIBLE</b>	21 339	24 288	37 637	25 099	38 935	40 473
Crude animal and vegetable materials	626	1 119	1 774	2 377	1 263	1 372
Logs and bolts	1 764	2 988	4 394	2 612	3 463	4 868
Pulpwood (roundwood and chips)	1 266	2 882	6 947	3 654	5 495	4 428
Other crude wood materials	2 881	386	117	706	200	218
Textile fibres	34	71	96	83	128	93
Iron ores and concentrates	440	502	1 537	2 067	365	87
Other metal-bearing ores and concentrates	882	898	715	197	975	412
Crude mineral oils	720	927	560	369	4 582	4 828
Sand, gravel and crushed stone	8 425	9 891	15 236	8 897	17 741	17 300
Other crude non-metallic minerals	3 148	2 424	4 759	3 105	3 443	5 349
Waste and scrap materials	1 153	2 200	1 502	1 032	1 280	1 518
<b>FABRICATED MATERIALS, INEDIBLE</b>	45 074	51 737	57 091	61 751	57 054	51 419
Lumber and sawn timber	2 910	4 135	4 566	6 208	5 676	6 253
Other wood fabricated materials	1 047	2 638	2 071	3 494	2 002	2 013
Wood pulp	324	591	481	837	1 595	594
Paper for printing	1 159	1 526	2 164	2 660	1 480	2 022
Other paper and paperboard	397	480	440	246	661	538
Chemicals and chemical specialties	5 149	6 036	6 391	7 848	6 482	6 843
Gasoline	2 376	4 100	4 855	5 786	4 644	3 643
Fuel oil	6 049	6 852	8 316	6 651	5 883	5 008
Other petroleum and coal products	5 634	3 993	5 982	7 382	3 497	4 940
Primary iron, steel and basic products	6 582	7 344	7 798	6 691	8 617	5 737
Other metal alloys and primary metal products	2 422	2 563	3 081	3 156	2 645	2 373
Cement and concrete basic products	5 966	6 909	6 410	6 197	7 081	5 218
Other non-metallic mineral basic products	2 911	2 258	2 950	3 087	5 734	5 402
Other fabricated materials	2 154	2 312	1 586	1 508	1 057	835
<b>END PRODUCTS, INEDIBLE</b>	11 748	12 013	17 990	14 847	15 620	15 245
Drilling, excavating, mining, oil and gas machinery	1 990	1 027	3 920	2 290	2 403	3 921
Road motor vehicles and parts	2 941	2 960	3 717	2 616	2 989	3 080
Other end products	6 817	8 026	10 353	9 941	10 228	8 244
<b>GOODS NOT CLASSIFIED BY COMMODITY</b>	4 529	6 075	5 307	5 009	4 997	6 358
Containers and closures, full	1 309	1 712	1 709	1 681	1 207	1 408
General freight	3 114	4 113	3 203	2 913	3 020	4 135
Other unclassified	106	250	395	415	770	815
<b>Total</b>	<b>100 567</b>	<b>110 956</b>	<b>137 222</b>	<b>129 503</b>	<b>140 562</b>	<b>137 885</b>

**13.15 Canadian for-hire trucking industry<sup>1</sup>, excluding household-goods movers**

Establishments by province or region	1978	1979	1980	1981	1982 <sup>2</sup>
Atlantic provinces (No.)	289	330	348	331	321
Net operating revenues (\$'000)	11,301	14,059	16,354	20,227	19,547
Employees (Av. No.) <sup>2</sup>	4,757	5,064	5,143	4,881	4,764
Equipment (No.)	6,386	7,040	7,342	6,976	6,883
Trucks	1,277	1,360	1,315	1,157	1,071
Tractors	1,627	1,745	1,820	1,735	1,689
Semi-trailers	3,238	2,640	3,878	3,674	3,763
Full-trailers	107	117	119	180	116
Other equipment	137	178	210	230	244

**13.15 Canadian for-hire trucking industry<sup>1</sup>, excluding household-goods movers (concluded)**

Establishments by province or region	1978	1979	1980	1981	1982 <sup>P</sup>
Quebec (No.)	870	943	1,042	1,017	1,141
Net operating revenues (\$'000)	3,003	3,645	32,424	23,822	3,364
Employees (Av. No.) <sup>2</sup>	25,999	25,922	25,836	22,307	19,660
Equipment (No.)	30,432	31,570	31,463	28,479	26,172
Trucks	7,132	7,167	6,924	5,874	5,350
Tractors	7,947	8,032	7,864	7,299	6,359
Semi-trailers	13,920	14,922	15,097	13,924	12,629
Full-trailers	492	516	540	533	755
Other equipment	941	933	1,038	849	1,079
Ontario (No.)	988	1,044	1,122	1,075	1,154
Net operating revenues (\$'000)	81,464	88,658	64,800	89,453	41,955
Employees (Av. No.) <sup>2</sup>	37,716	37,178	36,531	35,745	33,041
Equipment (No.)	54,860	56,436	56,737	52,999	53,471
Trucks	7,351	7,414	7,190	7,067	6,732
Tractors	13,999	14,154	14,332	13,549	12,782
Semi-trailers	30,510	31,860	33,006	30,188	31,486
Full-trailers	1,547	1,305	456	472	597
Other equipment	1,453	1,703	1,753	1,723	1,874
Manitoba (No.)	147	166	174	169	164
Net operating revenues (\$'000)	10,527	12,436	14,543	15,894	12,802
Employees (Av. No.) <sup>2</sup>	4,864	4,800	5,324	5,428	5,509
Equipment (No.)	8,036	8,174	9,708	10,853	11,163
Trucks	1,057	941	978	934	753
Tractors	1,686	1,775	2,090	2,238	2,158
Semi-trailers	5,177	5,224	5,940	6,614	7,374
Full-trailers	19	11	71	58	56
Other equipment	97	223	629	1,009	822
Saskatchewan (No.)	138	163	175	174	194
Net operating revenues (\$'000)	3,945	4,525	5,526	4,184	7,397
Employees (Av. No.) <sup>2</sup>	1,774	1,705	1,820	1,833	1,994
Equipment (No.)	2,450	2,719	2,952	2,951	3,448
Trucks	407	379	383	406	465
Tractors	747	799	841	795	920
Semi-trailers	1,265	1,465	1,667	1,699	1,969
Full-trailers	9	27	34	38	18
Other equipment	22	49	27	13	76
Alberta (No.)	600	649	806	739	895
Net operating revenues (\$'000)	32,267	44,876	61,773	53,051	46,402
Employees (Av. No.) <sup>2</sup>	10,772	11,057	12,835	11,066	11,154
Equipment (No.)	15,329	16,745	19,602	17,718	18,519
Trucks	2,105	2,246	2,505	2,182	2,298
Tractors	3,874	4,289	5,104	4,469	4,367
Semi-trailers	8,831	9,607	11,071	10,036	10,775
Full-trailers	230	176	252	475	535
Other equipment	289	427	670	556	544
British Columbia (No.)	546	579	639	628	660
Net operating revenues (\$'000)	22,969	26,711	32,750	30,029	14,332
Employees (Av. No.) <sup>2</sup>	10,716	10,665	11,196	11,329	9,344
Equipment (No.)	12,813	13,411	13,745	14,892	13,741
Trucks	2,358	2,439	2,513	2,540	2,190
Tractors	3,416	3,454	3,486	3,671	3,369
Semi-trailers	6,405	6,962	7,185	7,918	7,526
Full-trailers	173	100	209	316	235
Other equipment	461	456	352	447	421
Yukon and Northwest Territories (No.)	11	15	14	12	12
Net operating revenues (\$'000)	527	707	345	149	716
Employees (Av. No.) <sup>2</sup>	104	193	101	111	89
Equipment (No.)	186	309	161	134	126
Trucks	30	41	23	24	15
Tractors	56	97	45	40	44
Semi-trailers	97	166	93	70	62
Full-trailers	1	1	—	—	—
Other equipment	2	4	—	—	5
Canada (No.)	3,589	3,889	4,320	4,145	4,541
Net operating revenues (\$'000)	166,003	195,617	163,667	189,163	139,787
Employees (Av. No.) <sup>2</sup>	96,702	96,584	98,786	92,700	85,555
Equipment (No.)	130,492	136,404	141,710	135,002	133,523
Trucks	21,717	21,987	21,831	20,184	18,874
Tractors	33,352	34,345	35,582	33,796	31,688
Semi-trailers	69,443	73,846	77,937	74,125	75,584
Full-trailers	2,578	2,253	1,681	2,072	2,312
Other equipment	3,402	3,973	4,679	4,827	5,065

<sup>1</sup>Revenue classes 1, 2 and 3 only.<sup>2</sup>Including working owners.

### 13.16 Canadian for-hire trucking industry<sup>1</sup>, excluding household-goods movers, by revenue class, 1978-82

Year and item		Class 1 (\$2,000,000 and over)	Class 2 (\$500,000-1,999,999)	Class 3 <sup>2</sup> (\$100,000-499,999)	Total, all classes
<b>1978</b>					
Establishments reporting	No.	272	657	2,660	3,589
Total operating revenue	\$'000	2,601,655	742,346	676,951	4,020,952
Equipment operated					
Straight trucks	No.	8,847	4,439	8,431	21,717
Truck tractors	"	19,741	7,466	6,145	33,352
Trailers (semi- and full-)	"	49,987	13,458	8,576	72,021
Other equipment	"	2,526	706	170	3,402
Total, equipment	"	81,101	26,069	23,322	130,492
<b>1979</b>					
Establishments reporting	No.	315	760	2,814	3,889
Total operating revenue	\$'000	3,080,228	876,348	709,081	4,665,657
Equipment operated					
Straight trucks	No.	9,012	4,799	8,176	21,987
Truck tractors	"	20,673	7,607	6,065	34,345
Trailers (semi- and full-)	"	54,636	13,563	7,900	76,099
Other equipment	"	3,037	841	95	3,973
Total, equipment	"	87,358	26,810	22,236	136,404
<b>1980</b>					
Establishments reporting	No.	372	864	3,084	4,320
Total operating revenue	\$'000	3,503,568	936,715	783,521	5,223,804
Equipment operated					
Straight trucks	No.	9,167	4,605	8,059	21,831
Truck tractors	"	22,220	7,531	5,831	35,582
Trailers (semi- and full-)	"	58,386	13,549	7,683	79,618
Other equipment	"	3,916	666	97	4,679
Total, equipment	"	93,689	26,351	21,670	141,710
<b>1981</b>					
Establishments reporting	No.	411	917	2,817	4,145
Total operating revenue	\$'000	3,991,912	972,598	722,605	5,687,115
Equipment operated					
Straight trucks	No.	8,989	4,432	6,763	20,184
Truck tractors	"	21,740	7,171	4,885	33,796
Trailers (semi- and full-)	"	56,774	12,832	6,589	76,195
Other equipment	"	4,060	662	105	4,827
Total, equipment	"	91,563	25,097	18,342	135,002
<b>1982</b>					
Establishments reporting	No.	414	963	3,164	4,541
Total operating revenue	\$'000	3,874,471	964,482	749,570	5,558,523
Equipment operated					
Straight trucks	No.	8,414	4,147	6,313	18,874
Truck tractors	"	20,013	6,677	4,998	31,688
Trailers (semi- and full-)	"	58,740	12,494	6,662	77,896
Other equipment	"	4,096	860	109	5,065
Total, equipment	"	91,263	24,178	18,082	133,523

<sup>1</sup>Revenue classes 1, 2 and 3.

<sup>2</sup>In 1978 and 1979 these figures include carriers which were added to the survey universe for the first time.

**13.17 Canadian for-hire trucking industry<sup>1</sup>, excluding household-goods movers, by major type of service, 1978-82**

Year and item		General freight	Bulk liquids	Dump (sand, gravel, snow)	Forest products	Other commodities	Total
1978							
Establishments operating	No.	1,355	339	526	546	823	3,589
Total operating revenue	\$'000	2,423,159	198,645	153,668	218,449	1,027,030	4,020,952
Total operating expenses	"	2,346,007	181,653	145,438	206,048	975,802	3,854,949
Net operating revenue	"	77,152	16,992	8,230	12,401	51,228	166,003
Average number of employees (including working owners)	No.	66,207	4,091	3,370	4,106	18,624	94,398
Equipment operated							
Trucks	"	14,707	1,183	1,756	815	3,256	21,717
Tractors	"	19,817	1,538	1,238	2,279	8,480	33,352
Semi-trailers	"	45,123	2,350	1,588	2,784	17,598	69,443
Other equipment, including full-trailers	"	4,208	83	141	247	1,301	5,980
Total, equipment	"	83,855	5,154	4,723	6,125	30,635	130,492
1979							
Establishments operating	No.	1,405	370	580	637	897	3,889
Total operating revenue	\$'000	2,700,114	327,753	168,777	257,672	1,211,340	4,665,657
Total operating expenses	"	2,619,429	301,451	158,868	243,017	1,147,275	4,470,040
Net operating revenue	"	80,685	26,302	9,909	14,655	64,065	195,617
Average number of employees (including working owners)	No.	64,066	5,152	3,391	4,534	19,441	96,584
Equipment operated							
Trucks	"	14,895	1,361	1,768	893	3,070	21,987
Tractors	"	19,492	1,969	1,205	2,414	9,265	34,345
Semi-trailers	"	46,174	3,849	1,382	3,228	19,213	73,846
Other equipment, including full-trailers	"	4,286	193	130	136	1,481	6,226
Total, equipment	"	84,847	7,372	4,485	6,671	33,029	136,404
1980							
Establishments operating	No.	1,399	425	658	754	1,084	4,320
Total operating revenue	\$'000	2,797,924	309,973	206,183	368,700	1,541,025	5,223,805
Total operating expenses	"	2,769,977	281,551	194,412	347,641	1,466,561	5,060,142
Net operating revenue	"	27,947	28,422	11,771	21,059	74,464	163,663
Average number of employees (including working owners)	No.	60,643	4,767	3,783	5,265	22,148	96,606
Equipment operated							
Trucks	"	14,222	1,419	1,951	993	3,246	21,831
Tractors	"	19,072	1,777	1,305	2,615	10,813	35,582
Semi-trailers	"	46,597	2,846	1,613	3,801	23,062	77,937
Other equipment, including full-trailers	"	3,601	202	183	300	2,074	6,360
Total, equipment	"	83,492	6,244	5,070	7,709	39,195	141,710
1981							
Establishments operating	No.	1,345	408	593	770	1,029	4,145
Total operating revenue	\$'000	3,092,813	319,927	217,280	337,116	1,719,978	5,687,114
Total operating expenses	"	3,037,247	293,155	206,589	318,733	1,642,226	5,497,950
Net operating revenue	"	55,566	26,772	10,691	18,383	77,752	189,164
Average number of employees (including working owners)	No.	56,964	4,526	3,418	4,512	21,362	90,782
Equipment operated							
Trucks	"	13,129	1,284	1,741	933	3,097	20,184
Tractors	"	18,284	1,788	1,128	2,316	10,280	33,796
Semi-trailers	"	43,590	2,923	1,380	3,029	23,201	74,123
Other equipment, including full-trailers	"	3,720	194	210	308	2,467	6,899
Total, equipment	"	78,723	6,189	4,459	6,586	39,045	135,002
1982							
Establishments operating	No.	1,313	469	690	931	1,138	4,541
Total operating revenue	\$'000	3,002,553	380,979	217,633	355,171	1,632,188	5,588,524
Total operating expenses	"	2,988,470	348,328	205,460	336,533	1,569,945	5,448,736
Net operating revenue	"	14,083	32,651	12,173	18,638	62,243	139,788
Average number of employees (including working owners)	No.	51,050	5,430	3,471	4,570	19,468	83,989
Equipment operated							
Trucks	"	11,714	1,370	1,742	935	3,113	18,874
Tractors	"	16,672	2,063	1,281	2,547	9,125	31,688
Semi-trailers	"	44,560	3,357	1,525	3,827	22,315	75,584
Other equipment, including full-trailers	"	4,636	178	227	333	2,003	7,377
Total, equipment	"	77,582	6,968	4,775	7,642	36,556	133,523

<sup>1</sup>Some totals may not add due to rounding.

### 13.18 Motor carriers of freight<sup>1</sup> (MCF) and private trucking<sup>2</sup> (PT), comparative summary statistics, 1982

		Newfoundland		Prince Edward Island		Nova Scotia		New Brunswick		Quebec	
		MCF	PT	MCF	PT	MCF	PT	MCF	PT	MCF	PT
Reports received	No.	58	914	18	418	123	3,645	122	719	1,141	25,121
Equipment operated											
Trucks	"	231	7,800	69	2,600	462	14,900	309	7,000	5,350	100,600
Tractors	"	183	600	66	100	728	900	712	1,200	6,359	10,000
Trailers	"	348	900	82	100	1,299	1,200	2,150	1,700	13,384	16,300
Equipment, total	"	762	9,300	217	2,700	2,489	17,100	3,171	9,900	25,093	127,000
Vehicle distance run <sup>3</sup>	'000 km	22 938	..	8 260	..	75 757	..	74 115	..	665 059	..
Fuel consumed											
Gasoline	'000 L	2 749	70 380	796	11 648	5 941	110 415	4 553	58 439	59 113	550 203
Diesel	"	9 688	40 513	3 829	3 489	37 705	61 688	37 079	69 425	294 497	594 409
Propane	"	—	1	—	72	—	5 129	26	1 319	3 532	13 259
Fuel, total	"	12 436	110 895	4 625	15 209	43 646	177 232	41 658	129 182	357 142	1 157 872
Fuel cost	\$'000	5,751	53,940	2,103	7,241	15,899	74,973	16,663	55,019	152,946	544,986
		Ontario		Manitoba		Saskatchewan		Alberta			
		MCF	PT	MCF	PT	MCF	PT	MCF	PT		
Reports received	No.	1,154	26,323	164	1,308	194	5,307	895	8,569		
Equipment operated											
Trucks	"	6,732	149,600	753	17,000	465	31,800	2,298	76,600		
Tractors	"	12,782	16,000	2,158	700	920	1,400	4,367	3,900		
Trailers	"	32,083	30,600	7,430	1,300	1,987	3,000	11,310	8,300		
Equipment, total	"	51,597	196,200	10,341	19,000	3,372	36,200	17,975	88,800		
Vehicle distance run <sup>3</sup>	'000 km	1 073 183	..	190 452	..	102 728	..	454 821	..		
Fuel consumed											
Gasoline	'000 L	65 302	833 942	10 631	89 095	5 423	137 349	21 315	487 679		
Diesel	"	523 839	799 524	95 737	35 268	52 206	74 463	240 029	202 741		
Propane	"	2 452	93 144	458	4 275	12	7 142	1 285	23 245		
Fuel, total	"	591 593	1 726 610	106 827	128 638	57 641	218 953	262 630	713 665		
Fuel cost	\$'000	216,491	718,239	37,858	54,425	20,889	82,811	83,441	267,912		
		British Columbia		Yukon		Northwest Territories		Canada			
		MCF	PT	MCF	PT	MCF	PT	MCF	PT		
Reports received	No.	660	2,674	8	124	4	55	4,541	75,177		
Equipment operated											
Trucks	"	2,190	34,900	5	900	10	500	18,874	444,300		
Tractors	"	3,369	2,000	41	200	3	100	31,688	37,200		
Trailers	"	7,761	3,200	60	400	2	100	77,896	67,100		
Equipment, total	"	13,320	40,100	106	1,400	15	800	128,458	548,600		
Vehicle distance run <sup>3</sup>	'000 km	291 997	..	4 040	..	360	..	2 963 711	13 600 870		
Fuel consumed											
Gasoline	'000 L	19 254	166 361	149	1 905	92	2 452	195 318	2 519 868		
Diesel	"	147 962	157 869	2 111	8 760	111	1 834	1 444 793	2 049 982		
Propane	"	1 453	5 744	—	—	—	16	9 218	153 346		
Fuel, total	"	168 669	329 974	2 259	10 664	203	4 302	1 649 329	4 723 196		
Fuel cost	\$'000	62,676	140,862	908	4,150	82	1,833	615,685	2,006,752		

<sup>1</sup>For-hire carriers with \$100,000 or more annual gross operating revenue from trucking operations.

<sup>2</sup>Operators of trucking equipment having a fleet of five or more trucks, tractors and trailers, whose principal activity is other than for-hire trucking.

<sup>3</sup>Complete provincial breakdown unavailable for private trucking.

13.19 Vessels entered at Canadian ports, 1977-82

Year	In international seaborne shipping		In coastwise shipping		Total	
	Vessels	Net register tons <sup>1</sup>	Vessels	Net register tons <sup>1</sup>	Vessels	Net register tons <sup>1</sup>
1977	23,374	132,266,746	41,741	86,369,055	65,115	218,635,801
1978	23,433	138,687,621	44,606	86,521,016	68,039	225,208,637
1979	20,931	151,201,026	34,210	83,231,530	55,141	234,432,556
1980	28,754	168,477,033	38,015	87,846,321	66,769	256,323,354
1981	25,321	170,404,933	34,271	81,637,381	59,592	252,042,314
1982	24,791	152,476,124	29,148	74,965,550	53,939	227,441,674

<sup>1</sup> The capacity of the spaces within the hull, and the enclosed spaces above the deck, available for cargo and passengers; excluding spaces used for the accommodation of officers and crew, navigation propelling machinery and fuel. A register ton is equivalent to 100 cu ft and it is expected that this internationally recognized measure, like the nautical mile and the knot, will continue in use for some considerable time.

13.20 Cargoes loaded and unloaded at principal Canadian ports, by province, 1982 with totals for 1982, 1981, 1980 and 1979 (thousand tonnes)

Province and port	International		Coastwise		Total			
	Loaded	Unloaded	Loaded	Unloaded	1982	1981	1980	1979
NEWFOUNDLAND	1 159.2	1 066.3	447.2	2 159.6	4 832.3	5 405.9	6 084.2	6 148.4
St. John's	23.6	13.1	139.6	784.8	961.1	945.3	981.1	983.1
Holyrood	—	529.8	144.3	16.2	690.3	820.9	1 201.0	1 075.2
Corner Brook	251.5	17.2	9.3	292.7	570.7	766.8	744.0	693.1
Botwood	233.4	10.0	—	143.3	386.7	453.7	509.0	486.1
Port aux Basques	0.2	0.4	65.8	249.9	316.3	310.3	339.0	409.6
PRINCE EDWARD ISLAND	120.1	9.2	31.5	411.0	571.8	636.9	718.3	781.4
Charlottetown	51.8	9.2	5.5	334.2	400.7	486.0	546.7	615.9
NOVA SCOTIA	8 857.2	4 258.1	2 712.1	2 607.1	18 434.5	20 864.5	21 630.2	24 761.9
Halifax	3 563.6	3 676.0	1 585.0	1 275.4	10 100.0	11 911.1	12 122.9	12 017.5
Sydney	1 105.7	39.7	—	422.7	1 568.1	1 832.6	2 103.1	2 551.2
Port Hawkesbury	665.6	1.4	161.3	623.4	1 451.7	3 668.2	3 945.8	5 931.4
Hantsport	1 243.9	—	—	—	1 243.9	1 442.3	1 435.7	1 655.5
NEW BRUNSWICK	2 929.2	4 201.5	1 769.5	1 499.0	10 399.2	16 055.7	18 456.1	15 555.9
Saint John	2 012.4	3 893.3	1 731.4	1 102.0	8 739.1	14 201.1	16 650.2	13 562.3
QUEBEC	52 928.2	15 150.0	11 880.5	23 258.1	103 216.8	126 542.6	124 974.4	119 876.8
Port-Cartier	17 260.2	1 842.9	856.1	2 969.4	22 928.6	28 130.8	27 075.2	28 130.7
Montréal	6 193.8	3 178.4	4 893.6	4 839.7	19 105.5	21 107.0	21 233.0	16 313.6
Saint-Jules-Pointe-Noire	14 958.5	1 062.2	2 194.9	606.3	18 821.9	28 654.2	27 244.2	34 563.1
Québec City	6 320.9	843.7	1 119.5	6 127.1	14 411.2	13 875.8	14 638.2	13 250.0
Baie-Comeau	3 631.1	1 521.5	314.9	8 079.6	8 129.3	6 734.2	8 107.6	8 107.6
Sorel	1 952.5	310.6	29.6	2 329.2	4 621.9	6 216.7	7 231.1	4 949.9
Port-Alfred	371.2	2 953.3	—	461.0	3 785.5	4 048.3	4 528.1	2 873.7
Trois-Rivières	1 011.1	339.1	6.3	901.4	2 257.9	2 525.6	3 617.9	3 708.6
Havre-Saint-Pierre	281.1	—	1 499.1	10.0	1 790.2	2 078.7	2 702.2	1 081.2
Contrecoeur	353.4	219.4	5.5	681.4	1 259.7	4 174.5	3 494.6	2 789.3
ONTARIO	7 361.3	20 049.0	25 600.8	12 425.2	65 436.3	74 627.4	80 193.5	84 721.3
Thunder Bay	2 972.4	146.9	18 679.6	540.3	22 339.2	19 622.7	22 380.0	20 370.4
Nanticoke	20.0	5 533.9	469.5	2 233.3	8 256.7	7 159.9	5 897.4	6 398.3
Hamilton	923.7	3 839.3	76.8	3 088.0	7 927.8	10 444.8	14 197.7	14 614.2
Sarnia-Courtright	1 486.6	2 718.2	1 950.1	456.0	6 610.9	9 281.4	8 758.7	9 992.3
Sault Ste Marie	270.1	2 742.5	65.2	323.8	3 401.6	6 229.6	6 126.7	7 219.7
Windsor-Walkerville	1 581.7	533.3	555.0	436.5	3 106.5	3 528.8	2 945.3	3 488.6
Lakeview (Port Credit)	—	2 637.0	—	—	2 637.0	1 179.8	2 138.9	2 624.8
Toronto	142.9	701.2	59.5	667.5	1 571.1	1 947.9	2 486.0	2 111.7
Clarkson	116.0	25.0	160.0	1 142.4	1 443.4	2 211.8	2 063.5	3 137.2
Goderich	469.2	—	493.7	191.3	1 154.2	1 313.4	1 893.3	1 691.8
Colborne	—	—	1 078.9	—	1 078.9	1 423.5	1 519.9	2 408.6
MANITOBA	568.6	—	18.8	—	587.4	470.3	328.3	579.5
Churchill	568.6	—	18.8	—	587.4	470.3	328.3	579.5

### 13.20 Cargoes loaded and unloaded at principal Canadian ports, by province, 1982 with totals for 1982, 1981, 1980 and 1979 (thousand tonnes) (concluded)

Province and port	International		Coastwise		Total			
	Loaded	Unloaded	Loaded	Unloaded	1982	1981	1980	1979
BRITISH COLUMBIA	51 077.4	3 993.9	23 420.6	23 374.4	101 866.3	111 420.2	124 782.5	107 249.4
Vancouver <sup>1</sup>	43 454.6	2 508.3	2 441.9	3 244.4	51 649.2	52 945.1	51 645.2	38 635.0
New Westminster	550.0	639.8	1 232.7	1 543.8	3 966.3	5 170.0	6 165.1	4 808.8
Howe Sound	—	—	870.1	2 263.9	3 134.0	5 401.2	7 696.2	7 284.1
Nanaimo	1 115.2	6.6	112.1	1 358.3	2 592.2	2 864.5	3 734.8	2 431.4
Crofton	662.7	20.5	145.7	1 691.2	2 520.1	2 483.2	3 265.5	2 583.3
Prince Rupert	1 517.9	7.9	159.9	358.7	2 044.4	2 872.6	3 048.9	2 216.5
Victoria	37.5	111.9	999.7	621.6	1 770.7	1 842.1	3 184.5	2 168.8
Duncan Bay-Campbell River	368.0	54.9	195.0	917.3	1 535.2	1 991.5	2 154.8	2 034.2
Powell River	246.1	67.0	298.4	915.3	1 526.8	1 575.4	1 616.6	1 354.4
Kitimat	540.8	488.2	77.6	92.3	1 198.9	1 516.4	1 667.7	1 260.6
Port Alberni	512.2	—	98.1	423.8	1 034.1	1 135.3	1 638.4	1 498.6
NORTHWEST TERRITORIES	280.5	1.2	0.6	147.1	429.4	151.7	175.9	279.1
Total	125 281.6	48 729.3	65 881.6	65 881.6	305 774.1	356 175.2	377 343.4	359 953.8

<sup>1</sup>Includes Roberts Bank.

### 13.21 Principal commodities in water-borne cargo loaded and unloaded at ports handling large tonnage, 1982 (thousand tonnes)

Port and commodity	International		Coastwise		Total
	Loaded	Unloaded	Loaded	Unloaded	
VANCOUVER <sup>1</sup>	43 454.6	2 508.3	2 441.9	3 244.4	51 649.2
Coal	15 127.5	—	—	—	15 127.5
Wheat	6 006.1	—	—	—	6 006.1
Sulphur	4 839.9	—	4.7	—	4 844.6
Potash	2 596.2	—	—	—	2 596.2
Barley	2 485.2	—	—	—	2 485.2
Sand and gravel	79.4	620.3	197.4	1 576.8	2 473.9
Lumber and timber	2 116.1	15.6	65.3	102.4	2 299.4
Fuel oil	252.6	7.7	1 137.0	1.2	1 398.5
Limestone	988.5	2.3	—	371.7	1 362.5
Rapeseed	1 263.0	—	—	—	1 263.0
Wood pulp	923.9	4.9	2.9	321.2	1 252.9
Pulpwood chips	1 021.8	—	—	—	1 021.8
Other commodities not listed	5 754.4	1 857.5	1 034.6	871.1	9 517.6
PORT-CARTIER	17 260.2	1 842.9	856.1	2 969.4	22 928.6
Iron ore and concentrates	12 428.0	—	855.8	—	13 283.8
Wheat	3 233.1	580.1	—	2 391.0	6 204.2
Corn	1 292.4	1 126.3	—	44.3	2 463.0
Other commodities not listed	306.7	136.5	0.3	534.1	977.6
THUNDER BAY	2 972.4	146.9	18 679.6	540.3	22 339.2
Wheat	126.1	—	12 054.7	—	12 180.8
Barley	177.8	—	2 974.4	—	3 152.2
Coal	94.3	—	2 099.4	—	2 193.7
Potash	1 472.1	—	203.9	—	1 676.0
Other commodities not listed	1 102.1	146.9	1 347.2	540.3	3 136.5
MONTREAL	6 193.8	3 178.4	4 893.6	4 839.7	19 105.5
Wheat	2 176.2	130.3	—	2 384.5	4 691.0
Fuel oil	235.3	57.2	2 364.6	772.8	3 429.9
Crude petroleum	—	42.4	1 197.2	105.9	1 345.5
Gasoline	145.5	25.5	998.1	72.7	1 241.8
Barley	428.8	21.1	—	597.3	1 047.2
Other commodities not listed	3 208.0	2 901.9	333.7	906.5	7 350.1
SEPT-ÎLES-POINTE-NOIRE	14 958.5	1 062.2	2 194.9	606.3	18 821.9
Iron ore and concentrates	13 976.6	—	2 181.1	—	16 157.7
Coal	981.4	983.8	—	—	1 965.2
Other commodities not listed	0.5	78.4	13.8	606.3	699.0
QUÉBEC CITY	6 320.9	843.7	1 119.5	6 127.1	14 411.2
Wheat	3 874.9	97.8	—	3 198.9	7 171.6
Barley	860.6	—	—	931.3	1 791.9
Fuel oil	161.3	—	945.7	597.3	1 704.3
Other commodities not listed	1 424.1	745.9	173.8	1 399.6	3 743.4

### 13.21 Principal commodities in water-borne cargo loaded and unloaded at ports handling large tonnage, 1982 (thousand tonnes) (concluded)

Port and commodity	International		Coastwise		Total
	Loaded	Unloaded	Loaded	Unloaded	
HALIFAX	3 563.6	3 676.0	1 585.0	1 275.4	10 100.0
Crude petroleum	—	2 846.2	—	505.6	3 351.8
Gypsum	1 771.2	—	133.5	—	1 904.7
Fuel oil	65.6	164.5	880.1	434.0	1 544.2
Other commodities not listed	1 726.8	665.3	571.4	335.8	3 299.3
SAINT JOHN	2 012.4	3 893.3	1 731.4	1 102.0	8 739.1
Crude petroleum	—	2 290.6	—	691.7	2 982.3
Fuel oil	84.9	1 081.1	969.5	238.3	2 310.8
Other commodities not listed	1 927.5	584.6	761.9	172.0	3 446.0
NANTICOKE	20.0	5 533.9	469.5	2 233.3	8 256.7
Coal, bituminous	—	4 751.3	—	2 099.4	6 850.7
Other commodities not listed	20.0	782.6	469.5	133.9	1 406.0
BAIE-COMEAU	3 638.1	1 521.5	314.9	2 605.1	8 079.6
Wheat	2 054.5	547.9	—	1 547.6	4 150.0
Barley	750.9	—	—	756.6	1 507.5
Other commodities not listed	832.7	973.6	314.9	300.9	2 422.1

<sup>1</sup>Includes Roberts Bank.

### 13.22 Vessels and tonnage handled by harbours administered by Ports Canada<sup>1</sup>, 1983

Port or elevator	Vessel arrivals		Cargo handled '000 t	Grain elevator shipments '000 t
	No.	Gross register tonnage <sup>2</sup> '000 t		
St. John's, Nfld.	1,292	3,222	1 073	—
Halifax	2,422	22,249	12 472	466
Saint John, NB	1,639	19,786	8 374	312
Belledune, NB	39	374	315	—
Sept-Îles	741	14,559	20 223	—
Chicoutimi	190	478	514	—
Baie-des-Ha! Ha!	257	3,113	3 726	—
Quebec City	1,385	14,764	15 571	4 971
Trois-Rivières	424	4,799	2 988	1 255
Montréal	2,832	32,059	22 737	3 894
Prescott	35	423	374	212
Port Colborne	14	155	137	181
Churchill	64	496	652	631
Vancouver	15,342	86,385	51 648	11 147
Prince Rupert	1,762	7,762	3 107	1 776
Total	28,438	210,624	143 884	24 845

<sup>1</sup>Ports Canada data may differ in some instances from data in Tables 13.20 and 13.21 due to some differences in physical definitions of the ports, and to the use in some cases of different source documents.

<sup>2</sup>The capacity of the spaces within the hull, and the enclosed spaces above the deck, available for cargo and passengers, including spaces used for the accommodation of officers and crew, navigation, propelling machinery and fuel. A register ton is equivalent to 100 cu ft and it is expected that this internationally recognized measure, like the nautical mile and the knot, will continue in use for some considerable time.

## 13.23 Summary statistics of St. Lawrence Seaway traffic, 1982

Traffic and revenue	Montréal-Lake Ontario section			Welland Canal section		
	Cargo and revenue	%	Percentage change 1981	Cargo and revenue	%	Percentage change 1981
Cargo tonnes by toll classification	42 815 314	100.0	- 15.3	49 024 104	100.0	- 16.7
Bulk, n.e.s.	15 013 588	35.1	- 33.0	21 490 570	43.8	- 29.0
Grains	24 247 173	56.6	- 0.8	25 179 641	51.4	- 1.5
Government aid	292 456	0.7	+ 20.5	290 707	0.6	+ 19.8
Containers	78 478	0.2	+ 21.2	53 826	0.1	+ 37.4
General cargo	3 183 619	7.4	- 6.5	2 009 360	4.1	- 26.3
Traffic revenue (\$) by toll classification	33,332,681	100.0	- 3.1	24,529,232	100.0	+ 6.2
Bulk, n.e.s.	11,595,158	34.8	- 22.6	6,600,145	26.9	- 27.1
Grains	11,637,709	34.9	+ 16.1	7,761,044	31.6	- 1.4
Government aid	140,056	0.4	+ 40.8	90,119	0.4	+ 19.8
Containers	61,188	0.2	+ 41.1	16,686	0.1	+ 37.4
General cargo	6,053,279	18.1	+ 8.2	1,044,663	4.1	- 26.1
Gross register tonnage	3,826,592	11.5	+ 4.5	4,398,370	17.9	- 6.6
Other	18,699	0.1	+ 144.9	14,280	0.1	+ 20.3
Lockage fees	—	—	—	4,643,925	18.7	—
Vessel traffic						
Gross register tonnage	51,596,814	100.0	- 2.5	63,581,049	100.0	- 7.3
Cargo vessels	51,415,254	99.6	- 2.5	63,427,550	99.8	- 7.3
Non-cargo vessels	181,560	0.4	- 2.7	153,499	0.2	+ 8.6
Vessel transits, number	4,376	100.0	- 5.4	5,184	100.0	- 13.0
Loaded cargo vessels	2,693	61.5	- 15.8	2,961	57.1	- 21.7
Ballast cargo vessels	1,434	32.8	+ 21.6	1,990	38.4	+ 4.4
Non-cargo	176	4.0	- 11.1	204	3.9	- 18.7
Non-toll	73	1.7	+ 35.2	29	0.6	+ 61.1
	Tonnes			Tonnes		
Cargo tonnes by commodity	42 815 314	100.0	- 15.3	49 024 104	100.0	- 16.7
Agricultural products	24 515 880	57.3	- 0.6	25 403 722	51.8	- 1.3
Wheat	13 881 092	32.4	+ 16.4	14 255 133	29.1	+ 13.4
Corn	3 752 675	8.8	- 26.1	3 903 465	8.0	- 23.1
Rye	269 280	0.6	- 32.3	269 280	0.5	- 32.5
Oats	150 049	0.4	- 5.4	152 361	0.3	- 9.7
Barley	3 204 032	7.5	+ 8.6	3 317 056	6.8	+ 4.2
Soybeans	1 047 779	2.4	- 32.1	1 325 300	2.7	- 24.8
Flaxseed	263 384	0.6	- 5.9	263 384	0.5	- 5.9
Other grains	1 696 786	4.0	- 20.6	1 707 398	3.5	- 20.0
Total grains	24 265 077	56.7	- 0.8	25 193 377	51.4	- 1.5
Other agricultural products	250 803	0.6	+ 19.3	210 345	0.4	+ 17.04
Mine products	10 762 770	25.1	- 39.7	17 354 606	35.4	- 31.6
Iron ore	7 430 414	17.4	- 42.5	7 016 008	14.3	- 48.9
Coal	1 153 657	2.6	- 31.5	7 141 242	14.6	+ 8.6
Coke	680 806	1.6	- 20.2	756 836	1.5	- 22.1
Stone, ground, crushed, or rough	37 218	0.1	+ 41.8	116 372	0.2	- 88.9
Salt	714 901	1.7	- 37.0	1 419 270	2.9	- 19.5
Other mine products	745 774	1.7	- 39.4	940 878	1.9	- 28.3
Processed products	7 377 956	17.2	- 5.4	6 148 051	12.6	- 16.1
Iron and steel	2 840 255	6.6	- 4.3	1 769 024	3.6	- 27.6
Fuel oil	1 002 035	2.3	- 45.5	1 072 472	2.2	- 41.1
Other petroleum products	380 922	0.9	+ 5.1	365 485	0.7	+ 10.9
Chemicals	812 616	1.9	+ 27.6	758 440	1.6	+ 24.1
Other processed products	2 342 128	5.5	+ 17.4	2 182 630	4.5	+ 2.7
Miscellaneous cargo	158 708	0.4	- 33.1	117 725	0.2	- 71.6
Forest products	24 026	0.1	- 45.8	19 708	—	- 33.0
Animal products	134 682	0.3	- 27.3	98 017	0.2	- 35.9

## Sources

13.1 - 13.3 Aviation Statistics Centre, Transportation and Communications Division, Statistics Canada.

13.4 - 13.7, 13.9 - 13.21 Transportation and Communications Division, Statistics Canada.

13.8 Construction Division, Statistics Canada.

13.22 Ports Canada.

13.23 St. Lawrence Seaway Authority.

## CHAPTER 14

---

# COMMUNICATIONS



## UPDATE

---

By most standards Canada is among the world's leaders in telecommunications capacity: telephones and TV sets per capita, annual phone calls per capita, number of cable-delivered TV channels, and percentage of households with cable-TV.

Canadians telephone around the world almost as easily as they call across town, in most cases by direct dialing on circuits linking Canada to more than 180 countries, protectorates and territories.

Many communications services are provided by satellite technology. Canada was the third country, after the United States and the USSR, to put a satellite into orbit. Now Canada has eight satellites providing communications services.

For the past several years computer technology has played a growing role in communications. There are more than 16,000 large computer installations across Canada costing \$17,000 or more. Microcomputers generated about \$820 million in sales in 1983. The supporting software industry added another \$600 million.

## CHAPTER 14

---

# COMMUNICATIONS

<b>14.1</b>	<b>Communications revolution</b>	<b>443</b>
<b>14.2</b>	<b>Telecommunications system</b>	<b>443</b>
14.2.1	Carriers	444
14.2.2	Telecommunications networks	444
<b>14.3</b>	<b>Telecommunications services</b>	<b>445</b>
14.3.1	Voice communications – telephony	445
14.3.2	Record communications	446
14.3.3	Data and electronic message services	447
14.3.4	Videotex	447
14.3.5	Telecommunications in the North	448
14.3.6	International services	448
<b>14.4</b>	<b>The broadcasting system</b>	<b>448</b>
14.4.1	Canadian Broadcasting Corporation (CBC)	449
14.4.2	Private broadcasting	450
14.4.3	Cable television	450
<b>14.5</b>	<b>Federal policies, programs and regulations</b>	<b>450</b>
14.5.1	Department of Communications (DOC)	450
14.5.2	Canadian Radio-television and Telecommunications Commission (CRTC)	452
<b>14.6</b>	<b>Postal service</b>	<b>453</b>
14.6.1	Products and services	453
<b>14.7</b>	<b>Newspapers and periodicals</b>	<b>454</b>
14.7.1	Daily newspapers	454
14.7.2	Syndicates and wire services	454
14.7.3	Non-daily newspapers	454
14.7.4	Periodicals	455
14.7.5	Ethnic serials project	455
<b>14.8</b>	<b>Native communications program</b>	<b>455</b>

## TABLES

14.1, 14.2	Financial statistics of telephone systems	457
14.3	Trends in the telephone industry	458
14.4	Telephones in use, by province	458
14.5	Local and long-distance calls	460
14.6	Summary statistics of communications	461
14.7	Radio and television operations	461
14.8	Operation of cable television	462
14.9	Daily newspapers, number and circulation	463
14.10	Community, ethnic and other non-daily newspapers	463
14.11	Circulation trends of periodicals	464

## CHART

Chart 14.1	Consumer price index for telephone service	446
------------	--	-----

## COMMUNICATIONS

Canada's geography and history have made it a pioneer in communications. The need to link widely separated population centres across a vast landmass has meant that the nation's development, even its survival, depended first on efficient transportation and, later, communications.

Enormous changes in the Canadian communications system have been precipitated by the synergy between developments in computer and communications technologies. Thus the new information technology is making a sweeping impact on Canada's social, cultural, economic and political fabric.

On the eve of World Communications Year, 1983, Canada was in a position to contribute to the challenge of promoting the development of a complete worldwide communications network, because of its expertise in communications technology. During 1982, however, the rate of technological change was tempered by the problem of world economic hardship and restraint, with unprecedented high unemployment and inflation.

In Canada, despite this economic climate, significant gains were made in response to the needs of the information society. Canadian leadership was enhanced in areas such as office communications systems, Telidon applications, optical-fibre technology, space research and its applications.

Canada celebrated 20 years of space research and achievement in September 1982 and formally welcomed proposals from the US National Aeronautics and Space Administration (NASA) concerning the participation of the first Canadian in space.

### 14.1 Communications revolution

The first major thrust in the technological revolution has been the evolution of computers into all-purpose machines of soaring capabilities and falling cost. Semiconductor technology has shrunk computers in size and dramatically increased their cost/performance ratios. For the past several years, computer technology has played a growing role in communications. For example, Canada has two of the most sophisticated digital data communications networks in the world. Telephone companies have been installing digital multiplexing switches in their central offices and electronic telephone sets in homes and offices.

Second, new distribution technologies such as fibre optics are beginning to expand the carrying capacity of Canadian telecommunications systems. Fibre optics cables, composed of fine strands (or fibres) of ultra-clear glass through which high-frequency light waves are transmitted, can carry 10,000 times more information than conventional copper wires of equivalent cost. Canada has been one of the first countries to test this new technology under a variety of conditions for different purposes.

Most powerful distribution technology of all is the communications satellite. Canada has been among world leaders in its deployment. Satellites act rather like huge microwave towers in the sky and are used for long-distance voice, video and data communication. In contrast to costs for microwave transmission, those for satellite transmission are the same from Montréal to Vancouver as they are from Montréal to Toronto, abolishing distance as a meaningful concept in communications. Until the launch in January 1976 of the experimental Canadian-American communications technology satellite, later named Hermes (see also sections 14.2.2 Telecommunications networks and 14.5.1, sub-section Space), these satellites were essentially low-power, requiring large, expensive earth stations or antennas to pick up their signals and thus limiting access. According to the Science Council of Canada, the significance of Hermes and its successor, Anik B, is their high power; their earth stations can be relatively inexpensive and portable, making their signals more accessible. Low-powered parabolic dish receivers, to sell for about \$200, have been designed in Canada and other countries, notably Japan.

Canada's success in taking advantage of the new information technologies, and avoiding reliance on imports, with a consequent loss of industry and jobs, depends in part upon the capabilities of the Canadian communications system. It is no longer possible, as it was 10 or 15 years before, to distinguish between the technologies of telegraphy, telephony, radiocommunications and computers. All are used in almost every mode of telecommunications.

### 14.2 Telecommunications system

The Canadian telecommunications system comprises all the networks, equipment and services provided by

Canadian carriers. On a per capita basis, this system is the most extensive in the world, stretching across land and water from the east to west coasts, with branches north and south extending into virtually every community.

#### 14.2.1 Carriers

Canada's telecommunications carriers own and operate the networks, equipment and services of the Canadian telecommunications systems. Most of these carriers are privately owned, though a significant number are publicly owned. All are required by law to carry user calls, messages and other information at a reasonable cost without changing their content.

Most of the carriers are telephone companies, though they do not restrict themselves to telephone services. The size of their plants, all the equipment and buildings they own and operate, has been growing all the time (Table 14.1). Between 1975 and 1982 plant cost doubled from a little more than \$11.4 billion to almost \$24.5 billion. Over half of this — more than \$13.5 billion worth — was expended in Ontario and Quebec (Table 14.2). Across Canada, the telephone companies spent nearly \$2.9 billion on construction in 1982 and more than \$2.8 billion in 1981 (Table 14.1). These figures do not include construction expenditures and plants of carriers exclusively engaged in carrying telecommunications services other than telephone. A significant proportion of this expenditure across Canada went into the deployment of new computer and communications technologies.

Another indication of the economic significance of the industry: the telephone companies employed more than 105,000 people and paid out almost \$2.9 billion in salaries and wages during 1982 (Table 14.2). Wage and salary payments nearly doubled between 1977 and 1982 (Table 14.3).

Telecom Canada, previously known as the TransCanada Telephone System (TCTS) has been responsible for a national network joining regional networks of 10 telecommunications companies across Canada, including six privately-owned companies and three companies owned by Alberta, Saskatchewan and Manitoba provincial governments. The tenth member, Telesat Canada, operates Canada's satellite communications system; it is jointly owned by the federal government and other Telecom Canada members.

Telecom Canada and its members, long active in the Geneva-based International Telecommunication Union, has attempted to secure, with DOC, the compatibility of the Canadian telecommunications system with those of other countries.

CNCP Telecommunications, another major carrier, provides telecommunications services across Canada in competition with Telecom Canada. Until March 1980, CNCP was composed of Canadian

National Telecommunications and Canadian Pacific Telecommunications, each operating independently in many areas. In 1980, the two formed a partnership to unify their telecommunications services other than telephone and to effect economies.

**The Canadian Telecommunications Carriers Association (CTCA)** was the other framework for co-operation among carriers. It reduced the scale of its activities in 1981, especially its co-ordinating function for the International Telecommunication Union, but still undertook projects of common interest to its members, such as technical co-ordination studies with the Canadian Electrical Association to minimize inductive interference from electrical power lines. CTCA members included CNCP Telecommunications, Telecom Canada, most Telecom Canada members, the Canadian Independent Telephone Association, Teleglobe Canada (Canada's international carrier), the Canadian National Railway Co. and five other telephone companies.

#### 14.2.2 Telecommunications networks

New technology has been gradually transforming Canadian telecommunications. For example, analog communication (in which signals travel in continuous waves) was being replaced by digital communication (in which signals are transmitted in discrete pulses). The digital mode uses computer language and is able to carry more information and is less subject to interference than the analog mode. Introduction of digital and computer technology into telecommunications heralded the possibility of vast telecommunication networks, compatible with each other and with all terminal equipment, and capable of automatically routing vast numbers of signals.

Fibre optics transmission systems are replacing copper cable in many carrier networks, generally in applications where distance is short but traffic heavy. In Saskatchewan, a \$60 million fibre optic broadband network is being installed to link 52 major communities. The new network is capable of carrying voice, video and data traffic, with a top capacity of 12 video channels or their equivalent. The fibre optics cable is planned to extend for 3 200 km and enclose 38 million metres of optical fibre — more than had been produced in the entire world up to 1980. The target date for complete installation was 1985.

The backbone of Canada's telecommunications networks is still, however, three nation-spanning microwave networks. These networks consist of microwave stations about 50 km apart, which relay radio signals, amplifying them along the way. In general, each microwave channel could carry more than 1,200 telegraph, data or telephone signals or one TV circuit. Telecom Canada owns and operates two of these networks. CNCP Telecommunications operates the third.

**Telesat Canada** was incorporated in 1969 to establish and operate a domestic satellite system to supplement the terrestrial microwave systems. In 1972 Telesat Canada launched Anik A1, the world's first commercial domestic communications satellite, into geostationary orbit around the earth. Anik A2 was launched in 1973 and Anik A3 in 1975, to ensure reliable service and to keep pace with potential additional requirements. Each of these satellites had 12 channels in the 6/4 Gigahertz (GHz) frequency range.

These satellites, locked in geostationary orbit about 35 900 km above the equator, were comparable to enormous microwave towers. Signals sent to them could be relayed anywhere in Canada, and especially to areas too remote for economical service by terrestrial networks.

Initial commercial service to Telesat customers began in January 1973 through a network of earth stations — facilities for picking up satellite signals and also sending signals to satellites — strategically located throughout Canada. There are now hundreds of earth stations. Under federal regulations they can be owned not only by Telesat Canada but also by educational-TV networks, other telecommunications carriers and cable systems.

Telesat Canada launched Anik B, the world's first commercial dual-band satellite in December 1978. Like the Anik A satellites, Anik B has 12 channels in the 6/4 Gigahertz (GHz) band to replace some of the Anik A capacity. The new satellite also operated six channels in the 14/12 GHz band, where a higher-power beam could be used because of the lack of terrestrial communications services using this frequency. DOC began using four of the higher-frequency channels in early 1979 to continue exploration and development of new satellite communications services using techniques developed with its Hermes satellite. The 14/12 GHz band was used commercially for the first time in bringing French-language TV programming to several communities in Quebec in September 1980.

When Anik A1 and Anik A2 reached the end of their seven-year design life, they were still capable of limited use. But demand for 6/4 GHz satellite channels to distribute radio and television services rose in 1981 at the same time as the number of channels decreased because these two Anik A satellites had exceeded their lifespan. In response to this shortage, Telesat Canada launched Anik C1 and Anik D1 in 1982. Three Anik C-series satellites were planned, each with 16 channels in the 14/12 GHz band, to provide heavy route message service, possible business services and other new services, including TV distribution. Two Anik D satellites, each with 24 channels in the 6/4 GHz band, were also intended to replace and supplement the Anik A capability.

Canadian telecommunications networks interconnect with United States networks to reach the rest of North America.

**Teleglobe Canada** provides interconnection with international submarine cable and communications satellite networks linking Canada with countries outside North America. These international gateways or switching centres are in Montréal, Toronto and Vancouver. In Nova Scotia, Teleglobe operates an earth station which ties Canada into the international satellite communications system.

Roughly 44% of Teleglobe's total circuits were for satellite communications in 1981, and 56% tied Canada into the international submarine cable network. It was expected that nine international communications satellites would be launched between 1980 and 1984. Meanwhile, Teleglobe has been party to international planning for use of fibre optics technology in submarine cables, and for the construction of new submarine cables to cross the Pacific and Atlantic oceans.

Teleglobe collaborates with telecommunications administrations in other countries and a variety of international bodies to maintain and operate this sophisticated globe-girdling international network.

## 14.3 Telecommunications services

Telegraph services have given way to newer record communications services such as telex and a teletypewriter exchange service (TWX). From 1974 to 1979, the number of telegrams handled by CNCP declined, although the telegraph still served people who did not use telex or TWX. Many local telegraph offices were closed in favour of toll-free telephone service to the nearest area telegraph office. Newer services included data communications, facsimile and various message services. Then videotex technology promised to add a new dimension to communications in homes and offices. The new information technologies have enabled Canadian carriers and federal agencies to provide an increasing range of telecommunications services to remote northern communities while linking domestic services with more countries around the world.

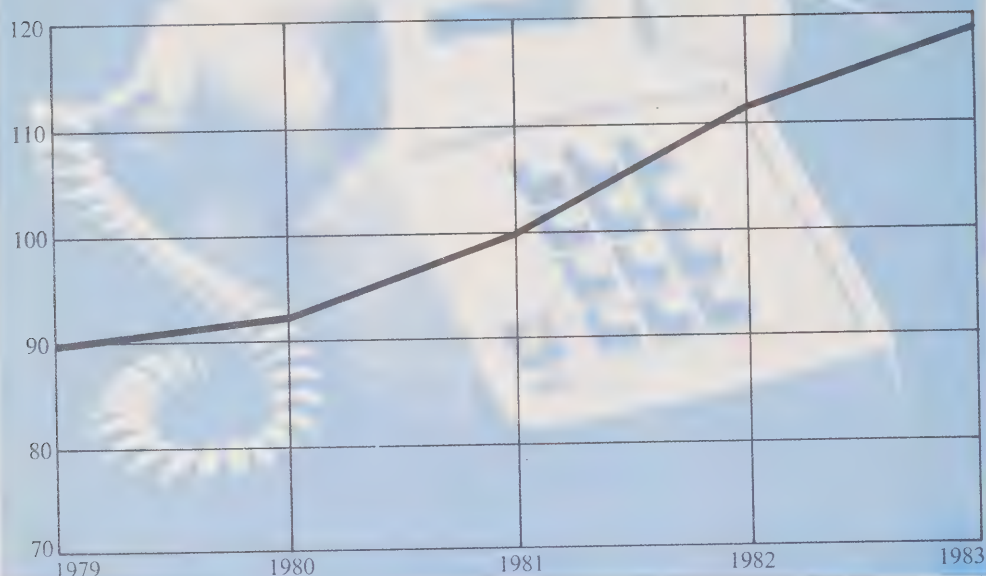
### 14.3.1 Voice communications — telephony

Meanwhile, Canadians have been using a growing number of telephones (Table 14.3). Despite the increase from 13.2 million to 16.8 million telephones, the number of telephone companies fell from 850 in 1975 to 120 in 1982. Each telephone company was responsible for integrating its facilities with those of all the others. Collectively, the nine largest Canadian telephone companies, which controlled about 95% of the telephones, operated the two TCTS microwave networks and all had access to Telesat Canada's satellite system for transmission of long-distance calls.

For a basic monthly charge, most telephone users can place as many calls as they wish in a defined area and talk as long as they like. With the expansion of major cities and the merging of small towns into

Chart 14.1

### Consumer price index for telephone service in Canada (1981=100)



larger communities, most telephone companies have introduced extended-area service which enables customers to place calls in a wider area without paying long-distance rates. The customer pays a slightly higher fee based on the number of telephones in his extended area.

Between 1980 and 1982, telephones increased on private lines for both business and residential use but decreased on party lines, which were gradually being phased out in rural areas. The ratio of telephones to population was highest in Alberta, followed by Yukon and Manitoba. The ratio was lowest in Newfoundland (Tables 14.3, 14.4).

The number of telephone calls rose dramatically between 1975 and 1982 and the number of long-distance calls increased more rapidly than local calls (Table 14.5). One reason is the growing ease in calling long distance. All telephone calls must pass through switching stations for routing. In the past this meant delays with step-by-step switching equipment using a number of separate switches. Now electronic switching systems and digital multiplex switching equipment can handle calls faster and more economically. If the most direct route is busy or out of order, automatic equipment instantly tries several alternative routes until a free or operating one is found.

#### 14.3.2 Record communications

**Public message service.** CNCP Telecommunications provides a public message service. Messages can be forwarded or received from any point in Canada or, through Teleglobe Canada, throughout the world.

The new information technologies have already invaded the telegraph office. Once a message is filed, it is entered directly into a mini-computer with the aid of a keyboard and visual-display unit. After its destination has been inserted, the message is released into store-and-forward computers for electronic transmission by the best available route. The message appears on a teleprinter terminal near its destination and is delivered by telephone, mail, telex or personal delivery.

**Electronic mail.** CNCP Telecommunications and Canada Post introduced a new electronic service called Telepost, available in Canada and the United States. Messages filed with CNCP are transmitted electronically to the postal centre nearest the addressee, then delivered by the local mailman.

**Telex and TWX** messages to overseas points are switched through Teleglobe Canada facilities. The total worldwide complex provides access to about one million subscribers. Telex, the first North American dial-and-type teleprinter service, was introduced in Canada in 1956 by CNCP

Telecommunications. TWX was provided by Telecom Canada.

As of 1981, there were about 50,000 telex units in Canada and some 75,000 in the United States. Telex and TWX are now considered to be almost universal services.

#### 14.3.3 Data and electronic message services

Data communications services involve sending information — often in the form of numbers — over systems with vast handling capabilities. Electronic message services comprise facsimile services (which transmit faithful, high-quality reproductions, whether in text or graphic form, of letters, documents, drawings, maps or photographs) or textual communications services. The message or data may be sent over public lines or lines owned or leased by the customer with the carrier providing only a switching service.

TCTS (renamed Telecom Canada in September 1983) and CNCP competed vigorously for this market. In 1967, CNCP introduced a broadband exchange service, an analog network which would permit higher rates of data transmission. In 1973, TCTS and then CNCP each introduced nationwide digital networks which had higher rates of transmission and spoke the same digital language as the computers in Canada. TCTS introduced a nationwide packet-switching network which radically improved the efficiency of digital networks in 1977 and CNCP brought out its own national packet-switching and circuit-switching network with similar advantages. In 1981 the two competitors introduced national textual communications services, permitting users to communicate over their own electric typewriters or word processors. These new technological developments increased the amount of information which could be carried and also the range and versatility of the carrier's service.

Both carriers offer a wide variety of store-and-forward message systems and different types of teleprinter, facsimile and cathode-ray-tube (CRT) terminals. These developments pointed toward the automated office of the future, in which much of the clerical work and some of the administrative and managerial work is computerized; typewriters, telephones, computer terminals, office copiers, message services and word processors are all integrated at multifunctional work stations. DOC estimated that by 1995 there would be 2.5 million multifunctional work stations in Canada. CNCP Telecommunications predicted a textual communications service using electronic mailboxes, terminals with access to in-house electronic files and outside data banks.

#### 14.3.4 Videotex

Videotex is a communications medium which permits the delivery of textual, graphic and facsimile information from central data banks to a slightly

modified TV receiver. This technology was originated by the British Post Office in the mid-1970s. The DOC communications research centre developed and demonstrated a second-generation videotex system, Telidon, in 1978. This two-way visual-communication system is an example of new services made possible by the marriage of communications and computer technologies.

Through an adaptor attached to or built into an ordinary TV set, a Telidon user can call up information stored in distant computer data banks and see it displayed on the screen in the form of text and graphics.

Telidon terminal equipment may be used to retrieve on a home or office TV the information stored in computers by businesses, schools, governments, newspapers and publishing houses around the world. It could also be employed for electronic banking, shopping, messages, education and mail services or computer games and other applications, without the subscriber having to leave his home or office.

All of these applications have been tested across Canada by telecommunications carriers, cable companies, governments and educational-TV networks. In these field trials, Telidon signals were transmitted by off-air broadcast, satellite, optical fibres, telephone and coaxial cable. The promise of Telidon encouraged many Canadian manufacturers to begin supplying Telidon hardware. A host of Telidon information-providers also emerged.

Superior to competing videotex systems because of the quality of its colour graphics, Telidon is rapidly becoming the accepted videotex standard in many parts of the world.

Canada's first commercial videotex service, Grassroots, provides farmer-subscribers in southwestern Manitoba with up-to-date weather forecasts, commodities and livestock prices, and community information, as well as a range of retail services.

Teleguide to Ontario is making it easier for Toronto-area residents and tourists to find their way around and enjoy the city's attractions. Telidon terminals placed in malls, hotel lobbies and other public locations can be used freely by anyone who needs information on bus and train schedules, entertainment, restaurants, special events and the weather.

Abroad, Telidon has opened new markets for Canadian high-technology products and services. Telidon services now operate in the United States, Great Britain, Venezuela, Australia and Switzerland.

At home, the department of communications administered a Telidon industry investment stimulation program providing \$10 million to help accelerate the introduction of Telidon services from coast to coast. The funds assist sponsors of 50 projects to buy Telidon equipment, thus stimulating innovation in the creation of new services, reducing

equipment costs, providing new jobs and developing the worker skills that will be in demand in the 1980s and 1990s.

### 14.3.5 Telecommunications in the North

Telesat Canada's Anik satellites opened up a new world of communications in the North, reaching into remote areas where surface systems encounter difficulties, and providing links with the populous South. They also brought a range of radio and television broadcasting services into communities beyond the reach of terrestrial networks. By 1980 Telesat Canada was operating about 40 satellite earth stations in Yukon and Northwest Territories, most of them capable of receiving radio, television, teletype, data and telephone signals.

**Growth in northern telephone services.** Radios operated by business, government and missions constituted the only public communications service until 1961. By 1967, there were 2,800 telephones in the western half of Northwest Territories, but by the end of 1980 there were 18,662, an increase of about 570%. A total of 99% of telephone users could, at the end of 1980, dial long distance directly.

DOC announced a northern communications assistance program in January 1977, aimed at providing every NWT community with basic and local long distance service by 1982. The federal government planned to contribute \$7.2 million for facilities and Bell Canada and NorthwesTel, created in 1980 as a subsidiary of Canadian National Telecommunications, were expected to commit a similar amount for local exchange equipment and operation of telephone circuits.

NorthwesTel provides telecommunications service in northern British Columbia, Yukon and Northwest Territories in an area of 2.35 million square kilometres with a scattered population of 67,000. Besides serving 39,169 telephones in 59 communities, the company provides telex, data communications, leased circuitry, telegram and radiotelephone services and has a continuing program of replacing electromechanical switching equipment with new solid-state digital equipment. NorthwesTel negotiated a 12-year agreement in 1980, with Alascom, an Alaskan telephone utility, for the lease of 600 voice channels for two years and an additional 1,500 channels for 10 years from the Alaskan-Yukon border to the Canada-US border in southern Alberta.

Bell Canada serves the eastern half of Northwest Territories up to the Arctic Circle, as well as northern Quebec. Bell Canada installed a new satellite service on Little Cornwallis Island during the fiscal year 1980-81 and added 29 long-distance telephone circuits to existing earth stations serving 24 communities. The trilingual telephone directory is in Inuktitut, English and French.

### 14.3.6 International services

Teleglobe Canada, a federal Crown corporation, links the domestic telecommunications carriers and almost every country outside North America. The mandate of the corporation is to establish, maintain and operate Canada's external telecommunications services and co-ordinate them with services of other countries.

Canadians now telephone around the world almost as easily as they call across town, in most cases by direct dialing. Teleglobe's telephone circuits link Canada to more than 180 countries, protectorates and territories. Teleglobe also provides the overseas connection for record communications — telex, TWX and telegraph — to 202 countries.

Teleglobe offers a public data service which interconnects with the domestic data networks of Telecom Canada and CNCP Telecommunications. This packet switching service enables users in overseas countries to have access to data bases in Canada.

New types of international message services have evolved because of the trend toward office automation and electronic mail. Teleglobe inaugurated a public high-speed digital service in 1979, designed to render a faithful, high-quality reproduction of information, whether in text or graphic form; this service reached nine overseas countries by 1981. Teleglobe and Canada Post began an experimental electronic mail service in June 1980, capable of interconnecting major Canadian cities with facsimile networks in the United Kingdom, the Netherlands and Switzerland. Teleglobe was also developing new textual communication services, including a capability for international communications among word processing terminals.

To determine the position videotex technology would occupy in the international marketplace, the Crown corporation initiated a \$4.1 million trial of Telidon. The data base for this trial was expected to have about 100,000 pages.

## 14.4 The broadcasting system

The broadcasting system, like the telecommunications system, evolved to meet the needs of a comparatively small bilingual and bicultural population in a vast country. One problem has always been to provide an adequate broadcasting service for all Canadians, even those living in remote places. This problem was compounded by the fact that the majority of Canadians live within 100 miles of the US border, and Canadian broadcasters have always had to compete for audience and advertising revenue with a dynamic and better financed US industry.

The first Canadian radio broadcast took place in 1919. Radio stations, most of them privately owned, sprouted across Canada. By the late 1920s, many

Canadians still had inadequate radio service and there was a growing preponderance of US programming. Out of these concerns the federal government-owned Canadian Radio Broadcasting Corporation emerged in 1932 and the Canadian Broadcasting Corporation (CBC) in 1936, which put together a national radio network. Since then Canada has had a broadcasting system with public and private elements.

Television broadcasting made its debut in Canada in 1952. The CBC began constructing its national television networks, and private television stations began to spread across Canada. The first private television network came into existence in 1961.

Until the 1960s, television and radio signals were all broadcast over the airwaves from broadcaster transmitters to viewer antennas. In that decade cable television appeared, permitting transmission of radio and TV signals over a copper wire from a central antenna. This improved reception and brought a much wider range of TV and radio signals to cable subscribers. In the early 1970s, Canadian communications satellites began to be employed to distribute TV signals, bringing television to many previously unserved rural and remote communities. Radio and television had become big business, with substantial advertising revenues.

In 1980 a growing number of Canadians in remote areas set up unauthorized earth stations to pick up TV signals from American satellites. Though American stations were available either over airwaves or by cable in most major urban areas in southern Canada, the unauthorized reception of US satellite signals began there too, partly because they carried pay-TV programs which included major sports events and first-run Hollywood movies. When these US satellite signals were distributed to other viewers, posing a threat to the Canadian broadcasting system, DOC began to take action.

As a result, the federal broadcast regulatory body, the Canadian Radio-television and Telecommunications Commission (CRTC), approved an application in 1981 for a Canadian broadcast satellite service, CANCOM, to make additional Canadian radio and TV broadcasting available to Canadians living in remote areas. The commission issued licences to six pay-television services which added a new dimension to Canadian TV viewing in 1983.

Meanwhile, DOC had been working on a comprehensive policy for broadcasting in the 1980s. With a growing number of channels available via satellite, cable and fibre optics distribution systems, it was expected that the mass-audience programming of the last few decades might give way to more specialized programming aimed at specific communities of interest. New video-cassette and videodisc technology, allowing users to purchase their own programs or copy broadcast programs, challenged Canadian broadcasters.

#### **14.4.1 Canadian Broadcasting Corporation (CBC)**

**Evolution.** In 1929 a federal royal commission on broadcasting recommended the creation of a national public broadcasting system, to counter the effects of American radio and to serve areas in which commercial radio was uneconomic. In 1936, Parliament passed the Broadcasting Act which created the CBC. The new public corporation, financed by licence fees and advertising, had two responsibilities: to provide a national radio service and to regulate all broadcasting in Canada — licensing, programs and commercial content.

During the next two decades there was continuing debate about the roles of private and public broadcasting. Revisions to the Broadcasting Act in 1958 gave regulatory responsibility to the Board of Broadcast Governors. In 1968 the CRTC was created and given responsibility for regulating broadcasting. Under the 1968 act, the CBC service was required to be: a balanced service of information, enlightenment and entertainment covering the whole range of programming in fair proportion; extended to all parts of Canada, as public funds become available; in English and French, serving the special needs of geographical regions, contributing to the flow and exchange of cultural and regional information and entertainment; contributing to the development of national unity and a continuing expression of Canadian identity.

**Facilities and coverage.** The CBC operates several national services: a French television network; an English television network; English and French AM radio and FM stereo networks; a special medium and shortwave radio service in the North; and an international shortwave and transcription service.

The CBC owned and operated 29 television stations in 1982-83 and 545 television network relays and rebroadcasters. Television programming was also carried by 32 affiliated stations, 95 affiliated rebroadcasters and 261 private or community-owned rebroadcast transmitters. Its national radio service owned and operated 60 radio stations and 549 rebroadcasters and low-power relay transmitters. The service was carried by 38 private affiliated radio stations, and 66 private or community-owned rebroadcast transmitters. The corporation had production centres in Montréal (French), Toronto (English), and many other cities.

The CBC radio networks, English and French, were available to 99.3% of Canadians as of March 1983. The comparable figure for the French and English television networks was 99.2%.

CBC radio presents popular and classical music, serious drama and light comedy, talk shows, analyses of politics and the arts, local news, current affairs, weather and traffic reports, and regional and network programming. The CBC radio service supports performers and writers and gives expression to the Canadian identity.

The English and French CBC television services provide Canadian programs consisting of news, current affairs, drama, sports, religion, science, children's programs, consumer information and light entertainment.

**Northern service.** CBC northern service provides radio and television to Yukon and Northwest Territories to meet the needs of Inuit, Dene, Métis and non-native northerners. Five radio production centres in the North prepare programs for culturally and linguistically distinct audiences. National network and northern-produced radio programs are delivered through terrestrial and satellite networks and broadcast on local transmitters in English and seven native languages — Inuktitut, Inuvialookton, Slavey, Hareskin, Dogrib, Loucheux and Chippewan.

CBC television in the North was largely provided by the Anik A satellites of Telesat Canada. In co-operation with the federal communications department, the CBC provided experimental delivery of television service to remote communities using 14/12 GHz transponders on Anik B.

Establishment of a small television production centre in Yellowknife gave the service a capacity for some northern production to supplement network telecasts. The schedule included programs from other regions and purchased northern-related programs.

**Parliamentary network.** Since 1979 the CBC has distributed the televised proceedings of the House of Commons to Canadian cable companies by means of satellite transmission. In late 1982 the parliamentary network was being distributed by 166 cable companies whose subscribers represented 47% of Canadian households.

**International broadcasting.** Radio Canada International (RCI), the CBC overseas shortwave service with headquarters in Montréal, broadcast daily in 11 languages and in English and French for Canadians abroad. Recorded Canadian programs distributed to broadcasters throughout the world have more than tripled in recent years. The CBC estimated that the RCI shortwave service reached several million listeners a week in the USSR, the United States, Africa, Europe and Latin America. RCI distributes music and spoken-word discs to American universities which have programs in Canadian studies. A new service to the Caribbean began to take shape.

#### 14.4.2 Private broadcasting

Revenues of private radio grew to almost \$476 million in 1982 from \$445 million in 1981 and \$397 million in 1980 — ranging from about 63% to 70% of the revenues derived from private television (Table 14.7). But profits before taxes from private radio declined to \$30 million in 1982 from \$39 million in 1981 and \$45 million in 1980, while before-tax profits of private television climbed steadily from \$103 million to \$128 million and \$143 million. One

explanation is the much greater dependence of radio stations upon local time sales; local advertisers pay much less for a radio advertisement than the large companies pay for national TV commercials. Besides, private radio stations collectively employed many more people and paid more in salaries and wages than the private television industry.

There are three TV networks in Canada, to which most of the private originating stations belong. CTV is national. Global, the other English-language network, operates only in Ontario. TVA, the only private French-language network, has originating stations and rebroadcast facilities in Quebec; and a rebroadcast facility in the Atlantic provinces.

Other private TV facilities are independent of the networks. Eleven of them broadcast in English, one in French and the other is multilingual.

#### 14.4.3 Cable television

A cable-TV system consists of a head end, comprised of a large antenna for assured reception of TV signals and studio facilities, and cable passing in front of homes in a given area. Service drops are used to connect a subscriber's TV set with the cable.

Cable television has expanded rapidly. In 1968, cable passed by 29.9% of Canadian homes, but only 13.2% of households subscribed to the service. By 1980, 80% of Canadian homes had access to cable while 54% subscribed to the service. The number of subscribers increased from 4.3 million in 1980 to 4.9 million in 1982 (Table 14.8).

One reason for this expansion was the popularity of the American stations which cable made available to Canadians.

### 14.5 Federal policies, programs and regulations

#### 14.5.1 Department of Communications (DOC)

This department, established in 1969, is the focus for federal communications policies and programs. It regulates use of the radio frequency spectrum and provides technical certification for broadcasting undertakings. The department is responsible for ensuring that Canadians have access to a broad range of communications services at reasonable cost. It aims at assuring the orderly development and introduction of new information technologies in light of Canadian economic, social, political and cultural concerns. In July 1980, the arts and culture branch of the federal secretary of state department was transferred to DOC in recognition of an increasingly close relationship between the production of cultural content and its means of distribution, especially when new information technologies were transforming the communications field.

**Policy.** A continuing focus has been the development of policies to ensure that the new information

technologies were shaped and deployed to meet Canada's social, cultural and economic needs.

Formulation of a broadcasting policy for the 1980s took into account the changes in communications technology already affecting broadcasting. Extension of broadcasting services into remote communities by satellite had long been a concern of the department.

The policy sector had been developing policies to stimulate Canada's TV program-production industry so that it could fill the many channels soon to become available via satellite, fibre optics and other technologies. Strengthening of the Canadian broadcasting system in relation to its US competitors continued as a priority.

The department encouraged the application of new computer, satellite and fibre optics technologies in Canadian telecommunications systems, through field trials and support of liberalized terminal-attachment policies. It explored how best to implement open-system interconnection so that telecommunications systems and terminal devices, including computers, would be compatible, permitting easier transfer of information. As well as assuring Canadian capability in the production of computer-communications hardware and software, the department studied such issues as the implications for Canadian sovereignty of transborder data flows, and the impact of the new technologies on employment, manufacturing and the whole economy.

**Space.** The department developed, co-ordinated and implemented policies and programs for Canada in space telecommunications and encouraged Canadian industry to share in developing Canadian satellite systems.

Hermes, launched in 1976, was in its time the most powerful communications satellite in geostationary orbit. It was a joint venture of DOC and the US National Aeronautics and Space Administration (NASA). It operated in the 14/12 GHz band, where it was less likely to interfere with terrestrial communications, enabling high-power transmissions to be beamed to small, relatively inexpensive earth terminals situated, if required, in urban areas. Hermes ceased operations in November 1979 after exceeding its design lifespan by almost a year.

The Hermes program demonstrated the technical feasibility of communications services using satellites and created awareness among potential users. Designed and built in Canada, it permitted DOC to conduct experiments in telehealth, tele-education, advanced technology, community interaction and TV broadcasting and other services provided by universities, hospitals, federal and provincial departments, native organizations and industry. These experiments involved use of a large number of earth stations and antennas ranging in diameter from 3 m for two-way television, voice and data, to 60 cm

for receiving only television signals under selected conditions.

The Anik B program continued exploring and developing new communication services by satellite and tested their commercial feasibility. The department leased from Telesat Canada Anik B channels in the 14/12 GHz band and provided the earth stations for pilot projects.

The applications were technically feasible with existing equipment and were sponsored by federal and provincial departments and agencies, telecommunications carriers, native communication associations, universities and hospitals. These projects were expected to lead to new commercial services on the Anik C or Anik D satellites.

The space sector continued research and development projects to prove the feasibility of MSAT, a mobile satellite system intended to provide two-way voice and low-rate data communications to users in such applications as oil exploration, mining, trucking, shipping, business, law enforcement and personal communications.

Much of the new satellite technology was developed at the department's communications research centre (CRC) near Ottawa. A large part of the technology was transferred to Canadian industry through contracts, because one DOC objective was to develop Canadian capability in the supply of satellites and space hardware. The department completed an \$18 million expansion and upgrading of its David Florida Laboratory in September 1980 to make it a fully-equipped national centre for testing and assembly of large communications satellites and aerospace subsystems. Canadian industry was able to use this facility on a fee recovery basis.

DOC participates in international space ventures, among them a satellite-aided search and rescue system (SARSAT) to aid in quickly locating aircraft or ships in distress, and general studies of the European Space Agency (ESA). Proceedings of an Inuit circumpolar conference at Frobisher Bay in July 1983 were carried by an interactive Telidon network linking Canada, Greenland and Denmark, Alaska and other parts of the United States.

**Research.** The department emphasized development of new technology, demonstrating it through field trials and encouraging Canadian industry to develop commercial applications. Studies were continued in spectrum research, environmental causes of signal noise, re-radiation problems in AM broadcasting, mobile data communications systems, automated radiotelephones, optical communications and methods of improving rural communications.

A \$12.5 million DOC program approved in November 1980 was designed to assist Canada's high-technology industry in capturing, by 1985, a significant share of markets for electronic equipment for the automated office of the future. The program

encouraged small- to medium-sized electronic firms to penetrate world and domestic markets. In October 1983 construction was started on an office communications systems research centre in Laval, Que., an affiliate of the communications research centre near Ottawa.

**Spectrum management and regulation.** DOC maintains control over radiocommunications by licensing. Radio stations (other than those used in broadcasting undertakings) using any form of Hertzian wave transmission, including television and radar, must be licensed by the department unless exempted by regulation. General radio regulations provide for six classes of radio stations: land, mobile, coast, earth, amateur and space. Various categories of licences in each class include public commercial, private commercial and experimental for land stations.

The telecommunications regulatory service in Ottawa is responsible for regulatory policies and regulations. Licensing, inspection and enforcement activities are carried out by DOC regional offices — Atlantic, Quebec, Ontario, Central and Pacific — and 44 district offices.

DOC installed a computer-based spectrum management system for land mobile services in 17 of its field offices, to enable more efficient use of the radio frequency spectrum, especially in urban areas where spectrum congestion is high.

**Government Telecommunications Agency.** This agency co-ordinates telecommunications services for federal departments, giving advice on the application of new technologies. Through the agency, DOC provides shared telecommunications services, leasing services from telecommunications carriers and allocating costs to departments.

#### 14.5.2 Canadian Radio-television and Telecommunications Commission (CRTC)

This commission regulates telecommunications carriers incorporated under federal legislation, and all broadcasting activities in Canada. It came into existence when the federal Broadcasting Act of 1968 was proclaimed. Then known as the Canadian Radio-Television Commission, it was responsible for regulating broadcasting in Canada, including cable television, except in purely technical aspects.

**Telecommunications regulation.** In the early 1970s, there was a growing recognition that the new information technologies were bringing about a sharp convergence of telecommunications and broadcasting. Under the Canadian Radio-television and Telecommunications Commission Act in 1976, the CRTC was renamed and was given regulatory power over certain telecommunications carriers. Previously the Canadian Transport Commission had this power.

Telephone and telegraph companies incorporated under federal legislation are subject to CRTC juris-

diction. These include Telesat Canada, Bell Canada, the British Columbia Telephone Co., CNCP Telecommunications, Northwest Telecommunications and Terre Nova Telecommunications. The remaining carriers, provincially incorporated or owned, fall under provincial jurisdiction. International telegraph and telephone communications are subject to an international telecommunications convention and its regulations or regional agreements. Overseas cables landed in Canada are subject to external submarine regulations under the Telegraphs Act.

Under the Railway Act, the CRTC must ensure that all tolls, including rates or charges for telecommunications services, are just and reasonable. Among other matters, the act gives the commission jurisdiction over interconnections between telecommunications carriers. CRTC rules of procedure for regulation of telecommunications carriers came into effect in August 1979.

**Broadcast regulation.** Canadian law regards publicly-owned broadcasting, commercially based radio and TV and cable television as a single system. This wording comes from the 1968 Broadcasting Act which provides the authority under which the CRTC regulates the Canadian broadcasting system.

The CRTC issues a broadcasting licence when the applicant has satisfied the technical requirements of the Radio Act and regulations. The CRTC regulates and supervises the broadcasting system, to implement certain policy objectives: effective Canadian ownership and control of broadcasting facilities, program variety to provide a balanced expression of views on matters of public concern, availability of service in English and French, and programming of a high standard, using predominantly Canadian creative and other resources.

Under CRTC regulations for AM radio broadcasting, 30% of the musical compositions presented by stations and networks between 6:00 a.m. and midnight are to be Canadian. Individual FM radio station or network operator commitments as to Canadian content are conditions of licence.

Under television regulations, broadcast time devoted to non-Canadian programming is not to exceed 40% between 6:00 a.m. and midnight. The CRTC *Special Report on Broadcasting in Canada, 1968-1978*, showed that the average Canadian watching English-language TV devoted 68% of viewing time to foreign-produced programs. The CRTC called for proposals to review the quantitative requirements. Almost 200 submissions were received by March 1981, and the CRTC held informal public meetings across Canada to hear the views of individual Canadians.

The CRTC had concluded earlier that the capability of cable television technology to enlarge the coverage areas of US stations and networks in Canada threatened Canadian broadcasting.

Regulations for cable television in 1975 reflected this concern. Local and regional stations were given precedence over distant stations when assigning distribution channels on any cable television system. There was also provision for substituting signals of a Canadian station for the signals of an American station when an identical program was being transmitted during the same period.

US development of pay television threatened its development in Canada. In January 1980 the CRTC appointed a committee on extension of services to northern and remote communities, to report on how television services to these communities might be increased and to deal with issues related to satellite distribution of programs and pay television. The committee report, *The 1980s: A decade of diversity — broadcasting, satellites, and pay-TV*, made 41 major recommendations. They included: an immediate call for licence applications for delivery of Canadian satellite television services in remote and underserved areas, consideration of support to create an Inuit broadcasting system, approval of pay television on condition that it would make a positive contribution to broadcasting in Canada, make use of Canadian resources and bring revenue to the Canadian program production industry.

Having heard a number of competing applications, the CRTC in April 1981 licensed Canadian Satellite Communications (CANCOM) Inc. to operate a multiple-channel television and radio broadcasting network with satellite delivery to remote and underserved areas. The service would comprise a variety of Canadian TV and radio signals, including the Inuit Broadcasting Corporation TV signal in Inuktitut and English, and a radio signal in the Indian and English languages. The CRTC called for applications for terrestrial facilities to distribute the CANCOM service, and expected the extension of service to be completed by the end of 1981.

The commission called for applications for introducing pay television in Canada in April 1981. The CRTC stressed that pay television should strengthen the Canadian broadcasting system, increase program diversity, and make available high-quality Canadian programming from new sources. The CRTC invited the applications to be imaginative and innovative in both the delivery structure and content.

In September 1980, the CRTC expressed a fundamental principle for a communications policy for disabled persons: universal access to all communications media within technical, economic and financial limits. Early in 1981, the CRTC allowed closed captioning on line 21 of the vertical blanking interval for persons with impaired hearing. A tele-caption adapter, on sale as a non-profit item, made it possible to pick up the captioning.

## 14.6 Postal service

Canada Post, formerly a department of government, was set up as a Crown corporation by the Canada Post Corporation Act, passed by the House of Commons on April 14, 1981. The corporation officially commenced operations on October 16, 1981, with the formal proclamation of the act.

Canada Post delivers mail to 8 million homes and businesses across Canada, a process that involves about 62,000 employees and 8,200 retail outlets located in more than 6,000 communities. The corporation has total revenues of about \$2.3 billion and pays out close to \$1.9 billion annually in wages and benefits to its employees.

### 14.6.1 Products and services

Canada Post provides eight basic services:

**Premium and standard mail.** First class mail, the basic postal service for letters, postcards, bills, receipts, and similar messages.

**Publishers' mailings.** Second class mail, for newspapers and periodicals.

**Admail.** Both addressed and unaddressed third class mail, the bulk mailing of advertising material which makes direct mail marketing widely available.

**Parcel post.** A national distribution service for parcels between 500 g and 30 kg in weight. Parcels are either first or fourth class mail.

**Priority post.** A courier service offering next-day delivery between major Canadian centres, and linking with other countries having similar service.

**Electronic mail.** Telepost enables the public to send messages electronically via phone, telex, or any telegraph office for delivery by mail to any address in Canada or the United States in hard-copy written form. Intelpost electronically transmits facsimiles of documents between specially equipped post offices in Canada as well as to certain overseas cities. EnvoyPost enables subscribers of the Envoy 100 service of Telecom Canada to reach any address in Canada by using the mail-delivery system.

**Special services.** Business reply cards, registered mail, special delivery, money packets, insurance, money orders, certified mail and C.O.D.

**Philatelic services.** Each year more than a dozen new stamps are issued by Canada Post and are sold, together with a variety of related products, by mail or from philatelic counters in post offices and other locations.

Many post offices also serve as distribution outlets for government forms, such as applications for passports, family allowances, old-age security pensions, income tax returns and the like.

Canada Post acquired fixed assets valued at \$1.56 billion encompassing over 2,200 owned properties, which included 29 major mechanized plants with sophisticated mail-sorting equipment and 115,000

metres of conveyor belts, 3,500 vehicles and 1.6 million lock boxes. The corporation also acquired leases for more than 1,100 properties and took over agreements with some 2,100 individuals for the operation of sub post offices.

During the fiscal year 1982-83 there were two increases in postal rates. On January 1, 1982, the basic letter rate was increased from 17 cents to 30 cents (the weighted average of postal rate increases was approximately 50%), and on February 15, 1983, it was further increased to 32 cents (an overall average increase of 6%).

## 14.7 Newspapers and periodicals

### 14.7.1 Daily newspapers

Daily newspapers published in Canada in 1982 numbered 120, counting morning and evening editions. Combined circulation was over 5.5 million — about 82% in English and 18% in French (Table 14.9). Publishers' surveys show that each newspaper is read by an average of 2.2 persons.

Daily newspaper advertising net revenue in 1981 was \$1.16 billion, up 18% from 1980. There were 10 dailies published in French, 102 in English, and two in other languages. Although the circulation of daily newspapers blankets the more populous areas well beyond publishing points, the smaller cities, towns and rural areas are also served by 960 community newspapers catering to local interests.

Chain ownership is a prominent feature of the Canadian newspaper industry. In 1982 the two largest newspaper chains were Southam Press Inc. (15 dailies) and Thomson Newspapers Ltd. (40). Both Southam and Thomson newspapers are publicly-owned companies with shares traded on Canadian stock exchanges. Southam accounted for about 27.5% of total daily circulation, Thomson for 21.5%.

In the French-language newspaper industry, Quebecor, with two dailies, controls 42% of the French-language circulation and Gesca with four dailies, controls 33%.

### 14.7.2 Syndicates and wire services

In addition to their news-gathering staffs and facilities, Canadian newspapers subscribe to syndicates and wire services. The largest Canadian wire service is The Canadian Press, a co-operative agency owned by most Canadian dailies. CP delivers by wire, at speeds ranging up to 1,200 words a minute, Canadian and world news to its 111 members; many of them also subscribe to Laserphoto which delivers more than 500 news photos a week by wire or to a mailed news photo service. Through its affiliate, Broadcast News Ltd., it provides news by wire and an audio service to AM and FM radio stations, to television stations, and for display by cable television companies. Another CP affiliate, Press News Ltd.,

serves CBC radio and television stations. CP has its own news-gathering staff in 14 Canadian cities as well as New York, Washington and London. Each member newspaper provides local news for transmission to fellow members and members share the cost in proportion to their circulations.

CP carries world news from Reuters (the British agency), from The Associated Press (the United States co-operative) and from Agence France-Presse (of France) and these agencies receive CP news on a reciprocal basis. CP maintains a French-language service in Quebec.

United Press Canada (UPC), the second major news wire service in Canada, is a private company owned by a partnership of the Toronto Sun Publishing Co. and United Press International, Inc. UPC was formed January 1, 1979 to supersede United Press International of Canada Ltd. which was a wholly owned subsidiary of United Press International (UPI). UPC provides Canadian coverage in news, sports and pictures from its staff bureaus across the country. Services are delivered at high speed (1,200 words a minute), slow speed, and by telephoto network. All UPC bureaus are linked to UPI's North American communications network and are equipped with video display terminals for copy transmission and editing and with telephoto transmitters for direct picture transmission. UPC also delivers to its newspaper, radio and television clientele the full worldwide services of UPI and provides coverage of Canada for distribution by UPI throughout the world. UPC has permanent staff bureaus in St. John's, Nfld., Québec City, Montréal, Ottawa, Toronto, Winnipeg, Edmonton, Calgary and Vancouver.

### 14.7.3 Non-daily newspapers

Canada's non-daily newspapers did not fare as well in 1982 as in previous years. The total circulation of non-dailies was down 2% from 1981 and the number of non-dailies decreased by 17. Although the 1981 revenues were up slightly from 1980, the increases did not keep up with the rate of inflation.

The non-dailies surveyed by Statistics Canada include shoppers, community newspapers, weekend tabloids, university and school papers and ethnic non-dailies. Shoppers, which had previously been included with community newspapers, are free distribution publications in a newspaper format consisting almost entirely of advertising. In 1982 there were 53 such papers in Canada with a total distribution per issue of 1.5 million and an average circulation of 28,000 per paper, about three times the circulation of the average community newspaper. The 960 community newspapers listed in 1982 had a total circulation of 8.8 million for an average circulation of just over 9,000 per paper.

Between 1981 and 1982, university and school papers were the only non-dailies to increase both

in numbers, from 86 to 94, and in total circulation per issue, from 1.05 million to 1.14 million. Average circulation of these papers remained constant at 12,000. Circulation of weekend tabloids remained unchanged at 585,000 but because the number of weekend newspapers increased from seven to eight, the average publication was left with a smaller slice of the circulation pie in 1982.

The number of ethnic non-dailies fell from 86 in 1981 to 74 in 1982. As a result, total circulation per issue of the ethnic papers dropped from 666,000 to 639,000 although the remaining papers had a higher average circulation. Since 1978, both the number and total circulation of ethnic non-dailies have decreased by 43%.

Sales revenues for non-dailies increased substantially, but advertising revenues grew at a much slower rate. Subscription and single copy sales totalled \$49.7 million in 1981, up 13% from the previous year. Advertising revenues rose from \$145.1 million in 1980 to \$153.6 million in 1981. Total revenues of \$203.3 million for the non-dailies in 1981 represent an increase close to 8% but if the effects of inflation are considered, the revenue of non-dailies was actually reduced.

#### 14.7.4 Periodicals

The greatest change in the Canadian periodical industry in 1982 was the disappearance of weekend supplements, the magazines distributed with Saturday editions of newspapers for many years. *Today Magazine* was closed down in August 1982 and *Perspectives*, its French-language counterpart, early in 1983. The only remaining weekend supplement, *En voyage*, is a travel supplement published six times each year and distributed with seven dailies.

Consumer, trade and ethnic magazines fared better than magazines in other categories in 1982, increasing both in number and total circulation from 1981. The total per issue circulation of ethnic magazines increased by 14% but still remained below the 1979 level. Consumer magazines and trade magazines increased their total per issue circulation 4% while the number of titles in each category increased 3%. Trade magazines had consistent growth over the past several years, and the 1982 increase in consumer magazine circulation brought it back to its 1980 level of 37.4 million.

Religious magazines had a small increase in circulation between 1981 and 1982, but their numbers dropped from 26 to 24, a further decrease from 35 in 1979. Farm magazines did not have a good year in 1982, with their total circulation down 8% for 113 publications, eight fewer than in 1981. Total circulation in the directories category in 1982 was down 5%.

Of the 62.1 million total circulation per issue of periodicals in 1982, 10.0 million was attributable to 416 foreign-published magazines, a slight drop from the 1981 figure of 10.1 million.

#### 14.7.5 Ethnic serials project

A Canadian ethnic serials project at the National Library of Canada contributes to the federal government's multicultural program. The national library undertook in 1973 to collect all serial publications of Canada's cultural communities. All known Canadian ethnic newspapers were ordered on subscription; all Canadian periodicals, including ethnic, have deposited two copies of each publication in the national library since 1969 as required by law. The collection of about 1,500 titles is the largest in Canada.

This program preserves and makes available to researchers material that would otherwise be lost or difficult to obtain. An ethnic serials specialist is on staff in the newspaper division to provide a reference and consulting service to researchers.

Periodicals and newspapers on microfilm in the national library collection are available to researchers on interlibrary loan; original newspapers must be consulted in the library.

*Checklist of Canadian ethnic serials* was published by the newspaper division of the national library in May 1981, listing all known Canadian ethnic serial publications.

#### 14.8 Native communications program

This program received cabinet and Treasury Board approval in 1981 to continue and expand its mandate until 1984. Grants are provided to native communication resource organizations set up to serve the communications needs of native people in given large geographical areas. The native communications societies collectively produce radio and television programs, newspapers, film and video, library services and point-to-point survival communications through high frequency and single side band radio systems.

**Sources**

- 14.1 - 14.5.2 Co-ordinated by Information Services, Department of Communications.  
14.6 Public Affairs Branch, Post Office Department.  
14.7 - 14.7.5 Education, Culture and Tourism Division, Statistics Canada; The Canadian Press; United Press Canada; Newspaper Division, National Library of Canada.  
14.8 Native Communications Program, Department of the Secretary of State.

**Selected references**

- Annual report 1982-83.* Canada Post Corp., Ottawa.  
*Annual report 1982-83.* Canadian Broadcasting Corp., Ottawa.  
*Annual report 1982-83.* Department of Communications, Ottawa.  
*Building for the future: towards a distinctive CBC.* Department of Communications, Ottawa, 1983.  
*Cable television, 1981.* Statistics Canada 56-205 (annual), Ottawa, 1982.  
*Culture and communications.* Department of Communications, Ottawa, 1983.  
*The Department of Communications, an overview.* Department of Communications, Ottawa, 1983.  
*Newspapers and periodicals, 1982.* Statistics Canada 87-001, Ottawa, December 1983.  
*Printing, publishing and allied industries.* Statistics Canada 36-203 (annual), Ottawa, 1983.  
*Radio and television broadcasting, 1982.* Statistics Canada 56-204 (annual), Ottawa, 1983.  
*Telephone statistics, 1982.* Statistics Canada 56-203 (annual), Ottawa, 1983.

TABLES

.. not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed

e estimate

p preliminary

r revised

certain tables may not add due to rounding

14.1 Financial statistics of telephone systems, 1975-82 (thousand dollars)

Year	Capital stock <sup>1</sup>	Long-term debt	Cost of plant	Revenue	Expenses	Construction expenditures
1975	2,519,844	4,435,368	11,426,333	3,054,705	2,650,396	1,679,893
1976	2,709,137	4,988,387	12,936,322	3,485,404	3,112,719	1,799,788
1977	2,880,682	5,489,543	14,531,598	3,962,314	3,577,324	1,905,106
1978	3,194,762	6,322,293	16,029,966	4,583,388	4,112,297	1,901,495
1979	3,564,875	6,606,879	17,754,852	5,339,842	4,786,338	2,132,536
1980	3,856,627	7,265,766	19,742,479	6,178,449	5,612,657	2,509,332
1981	4,119,627	8,015,933	22,297,545	7,379,726	6,715,814	2,853,237
1982	4,573,267	8,683,638	24,467,219	8,323,592	7,674,489	2,860,006

<sup>1</sup>Includes premium on capital stock.

14.2 Financial statistics of telephone systems, by province, 1979-82

Year and province or territory	Capital stock <sup>1</sup> \$'000	Cost of plant \$'000	Revenue \$'000	Expenses \$'000	Full-time employees	Salaries and wages <sup>2</sup> \$'000
1979						
Newfoundland	69,228	264,462	80,973	69,916	1,420	24,226
Prince Edward Island	18,646	64,940	19,106	16,427	318	5,110
Nova Scotia	128,879	542,752	168,124	146,739	3,655	58,946
New Brunswick	94,456	456,175	143,092	125,408	2,716	45,608
Quebec <sup>3</sup>	2,563,755	10,156,016	3,068,279	2,726,140	54,269 <sup>4</sup>	1,046,922 <sup>4</sup>
Ontario	101,290	207,450	64,411	44,233	...	...
Manitoba	—	705,803	200,262	190,335	4,133	81,045
Saskatchewan	9,299	718,690	202,133	176,899	4,079	76,270
Alberta	3	2,292,097	645,772	612,192	12,006	249,838
British Columbia <sup>5</sup>	579,319	2,346,467	747,690	678,049	13,943	283,817
Total	3,564,875	17,754,852	5,339,842	4,786,338	96,539	1,871,782
1980						
Newfoundland	68,752	289,462	91,640	79,978	1,371	26,146
Prince Edward Island	18,861	72,890	20,918	18,110	313	5,579
Nova Scotia	128,867	592,866	183,246	161,313	3,657	65,415
New Brunswick	96,289	489,107	155,322	136,822	2,752	45,108
Quebec <sup>3</sup>	2,868,651	11,248,114	3,468,326	3,130,523	56,223 <sup>4</sup>	1,245,935 <sup>4</sup>
Ontario	136,948	196,503	64,994	43,374	...	...
Manitoba	—	765,754	224,276	211,198	4,218	89,156
Saskatchewan	6,897	841,591	227,755	203,019	4,309	88,362
Alberta	1	2,643,734	773,180	739,639	12,947	298,856
British Columbia <sup>5</sup>	576,898	2,602,591	968,792	888,681	14,269	317,483
Total	3,856,627	19,742,479	6,178,449	5,612,657	100,059	2,182,039
1981						
Newfoundland	108,015	434,940	129,891	116,684	1,838	41,306
Prince Edward Island	19,125	79,937	24,678	21,366	319	6,592
Nova Scotia	131,567	663,755	209,950	186,395	3,650	76,573
New Brunswick	99,596	529,568	176,274	156,699	2,803	59,238
Quebec <sup>3</sup>	2,978,049	12,446,166	4,171,708	3,726,798	56,640 <sup>4</sup>	1,331,784 <sup>4</sup>
Ontario	100,091	214,869	77,033	51,114	...	...
Manitoba	—	846,189	251,901	234,942	4,206	101,735
Saskatchewan	10,470	934,038	276,158	251,878	4,645	109,552
Alberta	—	3,114,597	899,185	898,393	14,068	354,294
British Columbia <sup>5</sup>	673,084	3,033,485	1,162,947	1,071,546	14,456	372,448
Total	4,119,997	22,297,544	7,379,725	6,715,815	102,625	2,563,522

### 14.2 Financial statistics of telephone systems, by province, 1979-82 (concluded)

Year and province or territory	Capital stock <sup>1</sup> \$'000	Cost of plant \$'000	Revenue \$'000	Expenses \$'000	Full-time employees	Salaries and wages <sup>2</sup> \$'000
1982						
Newfoundland	120,535	470,504	145,732	129,292	1,748	43,129
Prince Edward Island	19,413	84,555	26,676	22,981	307	7,022
Nova Scotia	134,646	714,898	239,340	210,058	3,517	81,716
New Brunswick	103,792	566,150	195,648	172,085	2,702	62,870
Quebec <sup>3</sup>	3,337,484	13,545,576	4,715,979	4,221,243	58,518 <sup>4</sup>	1,626,691 <sup>4</sup>
Ontario	109,106	238,730	83,978	56,928	4,194	113,713
Manitoba	—	939,180	271,652	267,427	4,723	122,278
Saskatchewan	3,698	1,031,081	297,927	290,071	14,393	404,641
Alberta	—	3,488,381	1,027,704	1,081,011	14,959	420,570
British Columbia <sup>5</sup>	744,593	3,388,164	1,318,956	1,223,393		
Total	4,573,267	24,467,219	8,323,592	7,674,489	105,061	2,882,630

<sup>1</sup>Includes premium on capital stock.

<sup>2</sup>Full-time and part-time.

<sup>3</sup>Includes data of Bell Canada which operates in Quebec, Ontario and Northwest Territories.

<sup>4</sup>Ontario and Quebec combined.

<sup>5</sup>Includes data of CN Telecommunications for Yukon and Northwest Territories.

### 14.3 Trends in the Canadian telephone industry, 1975-82

Year	Number of systems reporting	Number of employees <sup>1</sup>	Salary and wage payments <sup>2</sup> \$'000,000	Telephones in use			
				Business '000	Residential '000	Total '000	Per 100 population
1975	850	82,866	1,091.4	3,928	9,237	13,165	57
1976	806	83,504	1,269.9	4,127	9,758	13,885	60
1977	333	87,546	1,446.6	4,309	10,179	14,488	62
1978	260	92,873	1,630.1	4,528	10,644	15,172	64
1979	223	96,539	1,871.8	4,761	11,078	15,839	67
1980	183	100,059	2,182.0	5,022	11,509	16,531	69
1981	153	102,625	2,563.5	5,193	11,751	16,944	70
1982	120	105,061	2,882.6	5,044	11,758	16,802	68

<sup>1</sup>Full-time employees only.

<sup>2</sup>Full-time and part-time employees.

### 14.4 Telephones in use, by province, 1979-82

Province or territory	Telephones						
	On private lines		On party lines		Extensions		Coin-operated
	Business	Residential	Business	Residential	Business	Residential	Business
1979							
Newfoundland	21,751	122,114	784	16,755	17,321	45,919	2,267
Prince Edward Island	3,448	23,391	276	12,508	7,070	11,588	428
Nova Scotia	41,130	216,168	1,493	43,511	38,171	88,784	3,810
New Brunswick	29,937	162,028	1,113	38,981	34,089	72,074	2,301
Quebec	330,042	1,850,239	7,697	273,571	281,599	638,971	28,580
Ontario	487,213	2,587,473	10,146	366,965	401,138	1,268,575	42,771
Manitoba	59,303	300,412	3,077	50,259	55,395	129,949	3,836
Saskatchewan	49,277	250,509	3,469	68,810	41,608	115,253	3,106
Alberta	153,938	626,911	4,937	84,864	130,393	332,462	10,173
British Columbia	168,203	750,811	2,847	186,839	118,033	322,052	10,225
Yukon	2,410	4,390	137	1,186	1,883	1,758	139
Northwest Territories	4,134	8,902	55	240	2,922	2,666	242
Canada	1,350,786	6,903,348	36,031	1,144,489	1,129,622	3,030,051	107,878

14.4 Telephones in use, by province, 1979-82 (continued)

Province or territory	Telephones							Telephones per 100 population
	Private branch exchanges		WATS <sup>1</sup>	Centrex	Mobile	Total		
	Business	Residential	Business	Business	Business			
Newfoundland	17,466	—	—	8,265	—	252,642	43.8	
Prince Edward Island	4,966	—	—	—	82	63,757	51.5	
Nova Scotia	33,126	—	1	8,648	466	475,308	55.9	
New Brunswick	23,191	—	—	12,583	217	376,514	53.4	
Quebec	385,526	35	3,374	170,368	816	3,970,818	63.1	
Ontario	597,979	47	7,650	241,362	1,993	6,013,312	70.4	
Manitoba	69,643	—	428	6,664	312	679,278	66.2	
Saskatchewan	46,468	—	57	13,994	887	593,438	61.5	
Alberta	181,885	—	448	17,405	30,472	1,573,888	76.7	
British Columbia	191,382	—	1,248	47,089	3,605	1,802,334	69.0	
Yukon	1,767	—	—	733	94	14,497	66.5	
Northwest Territories	2,545	—	—	1,257	205	23,168	53.8	
Canada	1,555,944	82	13,206	528,368	39,149	15,838,954	66.5	
	On private lines		On party lines		Extensions		Coin-operated	
	Business	Residential	Business	Residential	Business	Residential	Business	
1980								
Newfoundland	22,251	126,287	645	13,370	19,726	46,870	2,291	
Prince Edward Island	3,668	24,744	261	12,251	7,543	13,000	459	
Nova Scotia	43,860	223,481	1,508	42,358	40,853	99,271	3,974	
New Brunswick	30,764	165,954	1,123	39,050	32,401	77,521	2,434	
Quebec	342,773	1,951,985	6,889	257,613	290,844	670,901	30,742	
Ontario	505,446	2,688,815	6,695	353,000	395,876	1,290,508	45,010	
Manitoba	61,569	310,558	2,842	47,510	57,542	138,513	4,202	
Saskatchewan	52,206	259,755	3,537	68,999	44,501	126,918	3,282	
Alberta	176,231	667,677	5,279	87,580	144,688	360,786	11,228	
British Columbia	182,629	801,622	2,897	180,377	127,920	341,727	11,054	
Yukon	2,601	5,135	130	839	1,964	1,987	155	
Northwest Territories	4,415	9,036	63	183	3,278	2,878	261	
Canada	1,428,413	7,235,049	31,849	1,103,130	1,167,136	3,170,880	115,092	
	Private branch exchanges		WATS <sup>1</sup>	Centrex	Mobile	Total	Telephones per 100 population	
	Business	Residential	Business	Business	Business			
Newfoundland	15,878	—	—	10,548	751	258,617	44.3	
Prince Edward Island	5,119	—	—	—	95	67,140	54.1	
Nova Scotia	34,743	—	1	8,715	477	499,241	58.3	
New Brunswick	24,287	—	—	15,678	254	389,466	54.9	
Quebec	400,933	36	3,854	173,290	852	4,130,712	65.3	
Ontario	638,543	21	8,709	245,674	1,956	6,180,253	71.9	
Manitoba	72,649	—	517	6,999	515	703,416	68.5	
Saskatchewan	47,846	—	60	16,717	1,118	624,939	64.1	
Alberta	213,943	—	38	19,348	40,158	1,726,956	80.9	
British Columbia	206,334	—	1,444	50,121	3,949	1,910,074	71.1	
Yukon	1,953	—	—	894	110	15,768	73.3	
Northwest Territories	2,370	—	—	1,434	211	24,109	56.3	
Canada	1,664,598	57	14,623	549,418	50,446	16,530,691	68.6	
	On private lines		On party lines		Extensions		Coin-operated	
	Business	Residential	Business	Residential	Business	Residential	Business	
1981								
Newfoundland	22,819	130,072	660	12,087	20,987	49,943	2,361	
Prince Edward Island	6,308	25,494	239	12,338	5,154	14,061	487	
Nova Scotia	46,068	229,664	1,471	43,015	42,626	107,703	4,107	
New Brunswick	43,235	171,570	1,114	38,355	25,107	81,685	2,887	
Quebec	349,206	2,027,701	5,708	236,530	288,906	646,170	33,569	
Ontario	516,161	2,777,698	6,053	339,127	392,955	1,236,190	47,815	
Manitoba	63,799	320,640	2,629	45,792	59,865	148,943	4,391	
Saskatchewan	55,018	269,064	3,472	68,271	47,051	139,364	3,447	
Alberta	190,743	705,218	5,626	90,369	161,443	395,286	12,699	
British Columbia	195,524	838,515	3,020	177,089	134,745	351,216	11,655	
Yukon	2,968	5,680	126	652	1,926	2,174	184	
Northwest Territories	4,813	9,683	41	136	3,278	3,119	290	
Canada	1,496,662	7,510,999	30,159	1,063,761	1,184,043	3,175,854	123,892	

## 14.4 Telephones in use, by province, 1979-82 (concluded)

	Private branch exchanges		WATS <sup>1</sup>	Centrex	Mobile	Total	Telephones per 100 population
	Business	Residential	Business	Business	Business		
Newfoundland	14,019	—	—	11,758	730	265,436	45.1
Prince Edward Island	5,559	—	—	—	87	69,727	55.8
Nova Scotia	36,367	—	1	8,825	452	520,299	60.5
New Brunswick	27,991	—	51	9,724	363	402,082	56.4
Quebec	395,323	36	4,344	174,405	773	4,162,671	65.5
Ontario	648,872	22	9,005	250,647	1,768	6,226,313	71.9
Manitoba	76,277	—	627	7,457	860	731,280	70.7
Saskatchewan	50,639	—	69	19,302	1,179	656,876	66.5
Alberta	247,420	—	44	22,204	42,788	1,873,840	84.7
British Columbia	223,791	—	1,615	51,468	3,991	1,992,629	72.8
Yukon	2,273	—	—	796	121	16,900	74.8
Northwest Territories	2,372	—	—	1,735	218	25,685	58.2
Canada	1,730,903	58	15,756	558,321	53,330	16,943,738	69.6
	On private lines		On party lines		Extensions		Coin-operated
	Business	Residential	Business	Residential	Business	Residential	Business
1982							
Newfoundland	22,906	134,529	614	10,044	18,041	48,882	2,419
Prince Edward Island	6,233	26,301	233	12,353	5,133	15,574	525
Nova Scotia	46,375	234,162	1,425	42,244	43,496	114,854	4,123
New Brunswick	50,009	176,202	1,056	38,210	24,017	85,911	3,062
Quebec	334,696	2,056,114	5,147	229,656	271,821	612,732	37,024
Ontario	504,187	2,838,555	6,220	327,278	373,779	1,183,312	50,799
Manitoba	64,255	328,037	2,600	46,660	60,296	154,092	4,539
Saskatchewan	56,220	277,415	3,345	68,182	47,981	150,195	3,591
Alberta	210,787	682,206	5,725	34,426	138,134	433,363	13,555
British Columbia	188,395	866,240	2,744	168,075	126,401	341,142	12,975
Yukon	3,190	5,460	110	576	1,794	2,143	200
Northwest Territories	5,374	9,913	36	110	3,411	3,235	343
Canada	1,492,627	7,635,134	29,255	977,814	1,114,304	3,145,435	133,155
	Private branch exchanges		WATS <sup>1</sup>	Centrex	Mobile	Total	Telephones per 100 population
	Business	Residential	Business	Business	Business		
Newfoundland	17,112	—	—	12,846	844	268,237	46.6
Prince Edward Island	5,156	26	—	1,221	88	72,843	58.9
Nova Scotia	36,350	—	—	9,327	480	532,836	62.2
New Brunswick	23,229	—	83	9,047	367	411,193	58.2
Quebec	356,314	37	4,237	168,429	831	4,077,038	62.9
Ontario	604,139	22	8,277	243,994	1,539	6,142,101	70.2
Manitoba	78,220	—	7,533	7,533	1,193	748,170	71.8
Saskatchewan	52,923	—	88	19,544	1,313	680,797	68.7
Alberta	263,761	—	17	17,474	41,834	1,841,282	78.7
British Columbia	221,259	—	1,807	49,912	3,272	1,982,222	70.8
Yukon	2,304	—	—	861	177	16,815	72.5
Northwest Territories	4,166	—	—	2,040	265	28,893	61.0
Canada	1,664,933	85	15,254	542,228	52,203	16,802,427	67.9

<sup>1</sup>On wide area telephone service lines.

## 14.5 Local and long-distance calls, calls per capita and average calls per telephone, 1975-82

Year	Local calls '000	Long-distance calls '000	Total calls '000	Calls per capita	Average calls per telephone		
					Local	Long-distance	Total
1975	20,340,605	853,504	21,194,109	922	1,545	65	1,610
1976	21,301,349	917,812	22,219,161	953	1,534	66	1,600
1977	22,249,410	991,434	23,240,844	991	1,536	68	1,604
1978	22,986,788	1,082,619	24,069,407	1,020	1,515	71	1,586
1979	23,885,752	1,210,771	25,096,523	1,054	1,508	76	1,584
1980	25,501,063	1,340,263	26,841,326	1,114	1,543	81	1,624
1981	27,186,415	1,452,979	28,639,394	1,176	1,605	86	1,691
1982	27,554,131	1,475,376	29,029,507	1,173	1,640	88	1,728

14.6 Summary statistics of Canadian communications, 1975-82

Year	Operating revenues \$'000	Operating expenses \$'000	Net operating revenue \$'000	Pole-line length km	Wire length km	Em- ployees <sup>1</sup>	Telegrams '000	Cable- grams <sup>2</sup> '000	Money transfers \$'000
1975	259,059	193,811	65,249	51 744	1 235 347	7,162	4,115	8,016	81,798
1976	278,311	213,749	64,562	49 085	1 309 636	6,973	2,747	9,295	63,033
1977	302,083	226,314	75,770	45 936	1 363 186	6,863	2,312	11,337	58,672
1978	348,326	263,270	85,056	42 846	1 411 970	7,150	2,225	11,213	65,347
1979	411,759	282,843	128,916	42 063	1 479 216	7,247	1,953	10,176	60,081
1980	439,172	325,458	113,714	..	..	6,055	..	..	..
1981	492,966	370,798	122,168	..	..	6,118	..	..	..
1982	536,332	400,732	135,600	..	..	6,027	..	..	..

<sup>1</sup>Excludes commission operators.  
<sup>2</sup>Includes wireless messages and transatlantic telex messages.

14.7 Operating and financial summary of the radio and television broadcasting industry, 1979-82  
(thousand dollars)

Item	Private stations		CBC	Private stations		CBC
	Radio	Tele- vision		Radio	Tele- vision	
	1979			1980		
Operating revenue						
Revenue from sale of air time	351,529	440,161	87,148	391,457	509,959	100,903
Local time sales	256,046	121,423	10,511	286,685	140,924	10,961
National time sales	94,806	253,905	33,460	103,941	290,161	39,584
Network time sales	677	64,833	43,177	831	78,874	50,358
Production and other revenue						
Syndication revenue	11	2,930	—	134	7,989	—
Production revenue	1,683	25,634	—	2,073	36,262	—
Other revenue	2,961	3,817	2,688	3,530	7,827	3,249
Total, operating revenue	356,184	472,541	89,836	397,194	562,036	104,152
Departmental expenses						
Program	105,942	209,131	345,891	119,104	255,187	346,629
Technical	15,582	32,633	69,916	17,629	37,520	87,447
Sales and promotion	73,282	45,761	21,843	82,400	53,358	21,514
Administration and general	102,506	76,496	151,880	116,622	87,417	148,044
Total, departmental expenses	297,312	364,021	589,530	335,755	433,482	603,634
Depreciation	10,972	17,058	29,302	12,393	19,749	32,566
Interest expense	11,379	10,743	14,053	15,394	16,989	14,053
Other adjustments – income (expense)	6,162	15,050	3,162	11,827	11,149	3,249
Net profit (loss) before income taxes	42,683	95,769	...	45,479	102,966	...
Net cost of CBC operations	...	...	539,887	...	...	542,852
Salaries and other staff benefits	160,705	128,656	344,259	181,067	148,710	335,604
Average number of employees	9,069	6,365	12,241	9,547	6,685	12,104
	1981			1982		
Operating revenue						
Revenue from sale of air time	438,127	589,811	102,318	465,931	670,832	106,989
Local time sales	322,871	157,643	11,687	356,921	166,765	13,103
National time sales	114,079	339,166	74,595	117,411	393,763	76,004
Network time sales	1,178	93,002	16,036	1,598	110,305	17,882
Production and other revenue						
Syndication revenue	143	7,830	—	174	8,349	—
Production revenue	3,732	43,882	—	4,516	45,641	—
Other revenue	2,876	10,862	6,853	5,222	21,153	3,882
Total, operating revenue	444,878	652,385	109,171	475,843	745,976	110,871

### 14.7 Operating and financial summary of the radio and television broadcasting industry, 1979-82 (thousand dollars) (concluded)

Item	Private stations		CBC	Private stations		CBC
	Radio	Television		Radio	Television	
Departmental expenses						
Program	136,385	283,260	393,898	152,557	320,125	433,556
Technical	19,380	42,898	123,280	21,144	46,998	153,629
Sales and promotion	92,617	59,970	16,597	102,647	66,345	25,802
Administration and general	128,532	99,958	128,492	145,333	117,134	157,673
Total, departmental expenses	376,914	486,086	662,267	421,680	550,602	770,660
Depreciation	14,535	22,184	35,539	16,112	24,852	33,742
Interest expense	21,502	23,830	...	27,822	30,657	...
Other adjustments - income (expense)	6,639	7,443	2,803	20,197	3,017	—
Net profit (loss) before income taxes	38,565	127,729	...	30,425	142,883	...
Net cost of CBC operations	...	...	585,832	...	...	693,531
Salaries and other staff benefits	201,843	171,947	387,911	223,082	195,939	435,274
Average number of employees	9,693	6,841	12,258	9,737	6,840	12,129

### 14.8 Operating and financial summary of the cable television industry, 1979-82

Item	1979	1980	1981	1982
Operating revenue (\$'000)				
Direct subscribers	267,850	301,171	348,751	411,883
Indirect subscribers (apartments)	24,577	27,372	29,563	33,132
Installation (including reconnect)	18,085	20,326	23,147	22,977
Education services	2	8	13	4
Other	3,233	3,294	3,548	4,348
Total, operating revenue	313,747	352,172	405,024	472,344
Operating expenses (\$'000)				
Program	20,430	22,114	30,481	37,739
Technical	81,648	92,828	110,711	127,232
Sales and promotion	12,449	12,022	14,485	14,866
Administrative and general	68,799	75,465	89,578	108,677
Depreciation	56,139	64,192	67,466	71,603
Interest expense	27,360	34,327	59,114	81,537
Other adjustments - addition to (or deduction from) income	2,658	2,153	3,148	5,329
Total, operating expenses	264,169	298,795	368,687	436,126
Net profit (loss) before income taxes	49,578	53,376	36,336	36,218
Salaries and other staff benefits	87,275	92,758	109,030	129,664
Number of employees, weekly average	5,652	5,480	5,802	5,965
Number of subscribers ('000)				
Individual	3,390	3,651	3,995	4,224
Indirect (contract with apartment building owner)	694	688	705	709
Total, subscribers	4,084	4,339	4,701	4,934
Number of households served ('000)				
Households in licensed area (including apartments)	6,211	6,378	6,651	6,895
Households offered service (cable passes by building)	5,942	6,111	6,324	6,605
Households in multiple dwellings, offered service (apartments)	1,428	1,612	1,703	1,778

## 14.9 Daily newspapers, number and circulation, 1978-82

Year	English		French		Other		Total	
	Number	Average daily circulation '000	Number	Average daily circulation '000	Number	Average daily circulation '000	Number	Average daily circulation '000
1978	108	4,351	12	1,092	7	91	127	5,534
1979	109	4,367	11	940	6	46	126	5,354
1980	107	4,403	11	979	5	42	123	5,425
1981	106	4,608	11	980	3	38	120	5,624
1982	108	4,577	10	985	2	7	120	5,570

## 14.10 Number and circulation of non-daily newspapers, 1978-82

Type	Number	Circulation per issue '000	Average circulation
Community newspapers			
1978	1,105	10,495	9,498
1979	1,039	9,600	9,240
1980	1,007	10,225	10,156
1981	1,027	10,677	10,396
1982	960	8,801	9,168
Shoppers			
1982	53	1,495	28,208
University and school papers			
1978	86	1,414	16,440
1979	92	1,235	13,426
1980	84	942	11,219
1981	86	1,048	12,192
1982	94	1,141	12,139
Weekend tabloids			
1978	14	1,167	83,372
1979	14	1,107	79,055
1980	7	613	87,595
1981	7	585	83,602
1982	8	585	73,073
Ethnic non-dailies			
1978	130	1,118	8,599
1979	123	1,157	9,405
1980	86	811	9,430
1981	86	666	9,739
1982	74	639	8,629
Total			
1978	1,335	14,194	10,632
1979	1,268	13,099	10,330
1980	1,184	12,591	10,635
1981	1,206	12,976	10,759
1982	1,189	12,660	10,648

**14.11 Periodical circulation trends, 1979-82**

Type	1979		1980		1981		1982	
	Number	Circulation '000	Number	Circulation '000	Number	Circulation '000	Number	Circulation '000
Consumer magazines	626	38,377	644	37,428	655	35,638	673	37,378
Weekend supplements	5	8,552	3	4,024	3	4,031	2	1,256
Religious magazines	35	885	28	805	26	770	24	794
Ethnic magazines	26	176	15	112	19	123	22	142
Scholarly publications	5	13	5	11	6	14	6	13
Farm magazines	112	2,307	112	2,387	121	2,565	113	2,367
Trade magazines	545	7,359	507	8,622	499	8,863	515	9,288
Newspaper TV guides	30	6,165	29	5,890	33	7,099	36	6,171
Directories	52	2,922	52	4,311	61	4,412	60	4,208
Total	1,436	66,756	1,395	63,590	1,423	63,515	1,451	61,617

**Sources**

14.1 - 14.8 Transportation and Communications Division, Statistics Canada.  
 14.9 - 14.11 Education, Culture and Tourism Division, Statistics Canada.

CHAPTER 15

---

# CULTURAL ACTIVITIES AND LEISURE



## HIGHLIGHTS

---

With the arrival of the 1980s, pay-TV, video discs, videotapes and other new technologies signalled the merging of culture and communications.

In recent years several government initiatives have stimulated the growth of a distinctive Canadian culture. Examples are: regulations for the amount of Canadian content required for TV and radio broadcasting, capital cost allowances to encourage investment in feature films and videotapes, and financing for Canadian book publishing.

The cultural sector is labour-intensive and generates thousands of jobs for Canadians. Thus it can be viewed in economic as well as social and artistic terms. A cultural statistics program begun during the 1970s has surveyed visual artists, writers, actors and directors, musicians and composers.

In 1981-82, about 1.8% of federal spending went to cultural activities while the provinces, on average, spent about 1.2% of their budgets on culture.

Ownership of recreational equipment is increasing. Government programs encourage fitness and amateur sport.

<b>15.1</b>	<b>Changes in cultural growth</b>	<b>469</b>
15.1.1	Federal policies for the arts	469
<b>15.2</b>	<b>Cultural statistics program</b>	<b>469</b>
15.2.1	Creative and performing artists	470
<b>15.3</b>	<b>The performing arts</b>	<b>471</b>
15.3.1	National Arts Centre	473
<b>15.4</b>	<b>Support for the arts</b>	<b>473</b>
15.4.1	Federal support to the arts	473
15.4.2	The Canada Council	473
15.4.3	Provincial aid to the arts	475
15.4.4	Canadian Conference of the Arts	476
<b>15.5</b>	<b>Museums and galleries</b>	<b>476</b>
15.5.1	National Museums of Canada	476
15.5.2	National programs	478
<b>15.6</b>	<b>Books</b>	<b>478</b>
15.6.1	Book publishing	478
15.6.2	Reading habits	479
<b>15.7</b>	<b>Public archives and library services</b>	<b>479</b>
<b>15.8</b>	<b>Canadian films</b>	<b>480</b>
15.8.1	National Film Board	480
15.8.2	Telefilm Canada	481
15.8.3	Film statistics	481
<b>15.9</b>	<b>Home entertainment and recreation</b>	<b>482</b>
<b>15.10</b>	<b>Fitness and amateur sport</b>	<b>483</b>
<b>15.11</b>	<b>Tourism</b>	<b>484</b>

## TABLES

15.1	Federal and provincial expenditures on culture	486
15.2	Canada Council support to the arts	487
15.3	Art sales, by type of artist	488
15.4	Income range of writers	488
15.5	Incomes of actors and directors	488
15.6, 15.7	Statistics on the performing arts	488
15.8	Large cultural institutions	490
15.9, 15.10	New books published	490
15.11	National Library of Canada	492
15.12	Public library statistics	492
15.13	National Film Board summary	493
15.14	Foreign and Canadian feature films	494
15.15	Prices and attendance, movie theatres	494
15.16	Households with communications services	494
15.17	Freelance payments, CBC radio and TV	495
15.18	New phonograph records released	495
15.19	Recreational activities	496
15.20	Travel survey summary	496

## CHART

Chart 15.1	Federal spending for arts and culture	474
------------	---------------------------------------	-----

## CULTURAL ACTIVITIES AND LEISURE

### 15.1 Changes in cultural growth

In recent years, government agencies and the general public have devoted increasing attention to the cultural dimension of Canadian life. Canadian content regulations for television and radio and a capital cost allowance for investors in Canadian feature films are two examples of government action designed to stimulate Canadian creative expression.

Total federal government expenditures on culture in recent years increased to nearly \$1.3 billion in the fiscal year ending March 31, 1982 from \$1.1 billion in 1980-81 (Table 15.1).

As an example of growth over a 10-year period, Table 15.2 summarizes levels of support to the arts from 1973 to 1983 by the Canada Council. From this one funding agency, annual support for the arts rose from \$19 million in 1973-74 to \$60 million in 1982-83, and for theatre from \$4.8 million to \$13.4 million.

#### 15.1.1 Federal policies for the arts

The arts and culture sector in the federal department of communications (DOC) has had overall responsibility for developing federal policies designed to stimulate the creation, production, dissemination and conservation of Canadian cultural products and forms of expression.

One aspect of sector activities is liaison with eight of the federal cultural agencies to promote co-operation in meeting common cultural objectives. The agencies are: the National Film Board, Telefilm Canada (formerly the Canadian Film Development Corp.), the National Library of Canada, the Public Archives of Canada, the National Museums of Canada, the National Arts Centre Corp., the Canada Council, and the Social Sciences and Humanities Research Council.

The sector advises the responsible minister on national policies involving direct and indirect subsidies to the arts, conservation of the Canadian heritage and strategies to support Canadian cultural industries. For example, in the areas of film, videotape production, sound recording and book and periodical publishing, the sector develops policies and programs to increase Canadians' access to Canadian cultural products, by assuring the growth of Canadian-owned and controlled cultural industries.

To assist Canadian film and videotape production, the sector administered a 100% capital cost allowance, a tax deferral scheme, with about \$60 million invested in 1982 in Canadian film and videotape production. In January 1982, regulations for this program were tightened to ensure greater Canadian control. The sector was also responsible for a publishing development program which planned to disburse \$8.2 million to the Canadian book publishing industry in fiscal year 1983-84.

### 15.2 Cultural statistics program

Many aspects of culture cannot be quantitatively measured, such as the quality of a painting, the talent of a performer, the subjective enjoyment of an audience member, or even a particular need of support. However, as an element of the national economy the contribution of cultural activities to the gross national product can be measured. The cultural sector is labour-intensive and generates thousands of jobs for Canadians. Thus it can be viewed in economic as well as social and artistic terms.

With the arrival of the 1980s, there were clear signs that culture was subject to changing forces. Pay-TV, video discs, video tapes and other new technologies are only a few examples. The merging of culture and communications that is part of the communications revolution seemed likely to reshape many aspects of Canada's cultural life.

**Need for cultural statistics.** Governments have acknowledged the place of indigenous culture in the well-being of a nation. Over the past 20 years, government expenditures have been channeled into the promotion, development and support of Canadian culture in increasing amounts. Legislation and policy statements have backed the objective of enhancing the quantity and quality of Canadian creative work in all branches of cultural endeavour. A need emerged for precise information that could be useful to policy makers, administrators, researchers and the public at large. Such a need was identified as long ago as 1958 in the Massey report and again in 1969 in the report of the task force on government information, *To know and be known*. The federal cabinet, in July

1972, endorsed a recommendation for a program for a systematic collection, storage, retrieval and distribution of basic data concerned with cultural matters. This recommendation gave rise to the establishment of a cultural statistics program. More recently the federal cultural policy review committee confirmed, in the Applebaum-Hébert report, November 1982, the need to continue collecting statistics on culture.

**Progress to date.** Collection of data for the cultural statistics program was begun during the 1970s by Statistics Canada with financial support and co-operation of the arts and culture sector, first in the department of the secretary of state, then with the communications department. Continuing support was given by provincial departments and agencies responsible for culture and cultural development and by the Canada Council. Various cultural industries and their associations helped to determine the fields of study. The Canadian Conference of the Arts and many others including writers, performers and professional organizations provided input. In summary, the cultural statistics program has been guided by user needs. It is intended that the program should remain flexible to respond to changing needs and should assure continuity of its different elements.

At present the program consists of 10 major projects designed to examine the main aspects of cultural life in Canada. The comprehensive integrated plan includes sectors in which one cultural form or another may be observed. The program attempts to cover all aspects of culture ranging from creation to conservation. This encompasses production, distribution, consumption and preservation of cultural goods.

The cultural industries that Statistics Canada examines are publishing (books, newspapers, and periodicals), recording, film and video, radio and television. Surveys of government expenditure are carried out annually at both federal and provincial levels and plans are being made for a survey in the municipal area. A heritage institutions survey covers a diverse group that includes museums, public art galleries, archives, zoos, historic sites, planetariums, aquariums, botanical gardens and arboretums. Four library surveys are conducted to gather data on public, university, college and school libraries. In the annual survey of performing arts companies the theatre, music, dance and opera companies are examined. A cyclical survey of creative and performing artists looks at visual artists, writers and authors, actors and directors, musicians and composers, dancers and choreographers. The consumer aspect of culture is examined in a project on the cultural activities of Canadians, through leisure surveys, time-use surveys, analysis of family expenditure data and analysis of data from a proposed general social survey.

To make the information collected readily available to users, the program includes a specific

information plan to serve both general and specialized requests. Special requests are serviced at minimal cost and within the constraints of confidentiality as required by the Statistics Act.

### 15.2.1 Creative and performing artists

Beginning in 1978 the culture sub-division conducted, in successive years, surveys of visual artists, writers, and professional actors and directors. This series continued in 1983-84 with a survey of musicians and composers.

**Visual artists.** The survey of visual artists in 1978 found that only 20% of all artists in Canada earned more than \$5,000 in 1977 from the sale of their works. Such a low rate of remuneration undoubtedly explains why almost three-quarters of visual artists engaged in some form of labour force activity in addition to their artistic work and about one-quarter of those held full-time jobs.

Most artists with either full-time or part-time jobs worked in fields related to their art, especially as art teachers.

Just over half of the artists considered their artistic production a full-time occupation and either held no other employment or worked for wages and salaries only on a part-time basis. Another 25% relied on wages and salaries from full-time employment as their chief source of income; these are considered full-time wage earners. A third group, constituting 22% of all artists, had no paid employment apart from their artistic activities but earned less than \$5,000 a year from their art sales. This last group was described as part-time artists.

Many artists rely on grants, awards and prizes as sources of income in addition to art sales, wages and salaries.

About one-third of all full-time artists reported an average income from grants of \$1,865 in 1977. The artists regarded the high cost of dealer commissions and of imported art materials and equipment as significant in limiting their success. Over one-third of all artists stated that improved public education and appreciation of art was most important for the immediate development of the visual arts in Canada.

**Writers.** The culture sub-division conducted its first survey of writers in Canada in 1979. Those surveyed included creative writers, freelance newspaper and periodical writers, independent script writers and writers of non-fiction books.

About 30% of writers indicated that they wrote professionally on a full-time basis. Almost 70% said they wrote part-time. A small group were not active as writers during 1978.

On the whole, Canadian writers had low levels of writing income. Almost three-quarters of them earned less than \$5,000 in 1978 from writing. It is not surprising that over 60% of writers held jobs paying wages and salaries.

While few full-time writers (writing at least 30 hours a week) maintained other full-time employment, almost 30% of full-time writers had part-time jobs, 50% of part-time writers (less than 30 hours a week spent on writing activities) held full-time jobs and an additional 21% had part-time employment.

Just under half of those who had salaried employment worked in writing-related areas, teaching literature, journalism and related courses, publishing, editing, commercial writing and translating.

Almost half of those who had written books said that non-fiction had generated the greatest amount of revenue.

The most popular medium for writers was freelance work for magazines and newspapers in which 80% of all writers had engaged.

**Actors and directors.** In 1980, a survey of creative and performing artists undertaken by the culture sub-division studied Canadian actors and directors.

As in most areas of the performing arts, only a small number of people involved in the creative and interpretive fields of Canadian theatre, film, radio and television are able to derive an adequate income from these activities alone. More than 40% of Canadian actors and directors made less than \$5,000 in 1979 from what they considered their major area of involvement in the performing arts.

Over four-fifths of the individuals in the survey group spent less than 80% of the time in the performing arts during 1979. About 60% of these actors and directors, by choice or circumstance, did not make a full-time living in the performing arts and earned less than \$5,000 from their work in this area.

On the other hand, a small group of individuals who managed to work full-time in the performing arts throughout 1979 generally received an adequate income. Over 60% of those who spent four-fifths or more of their time in the performing arts earned more than \$15,000 from their professional work that year.

Most actors and directors employed outside performance, production or administration of the performing arts found related work, mostly in full-time or part-time teaching related to the arts. About one-quarter of the group supplemented their income in unrelated jobs.

When all sources of income are considered the entire survey group reported a median gross income of \$13,000 for 1979. Although 42.9% earned less than \$5,000 from their acting and directing, most of them had other sources of income and only 12% earned less than \$5,000.

**Musicians and composers.** The survey of performing musicians and composers was held in 1983. It revealed that, during 1982, musicians earned a median gross income from their music of \$3,500 and that over 30% had less than \$5,000 income from all sources.

### 15.3 The performing arts

**Performing arts** including theatre, music, dance and opera, share the collective entertainment market mainly with movies and sporting events. The appearance of television in the 1950s and its rapid growth was first seen as formidable competition for the stage. There was fear that TV entertainment at home would cut deeply into attendance at the performing arts.

But in the last two decades, instead of a decline of interest there has been a general upsurge particularly in theatre. Music, dance and opera have been close behind. Only recently has growth in theatre attendance levelled off while attendance at classical music concerts soared during the 1970s.

These results come from a survey of leisure activities conducted in conjunction with the monthly labour force survey of Statistics Canada in February 1978. Partial results were published in the annual *Culture statistics, performing arts, 1978*, Statistics Canada Catalogue 87-610, from which the following information has been extracted.

Vitality in the performing arts has occurred at all levels, amateur as well as professional. Greater numbers are not only attending but becoming actively involved for recreation. The proportion who go to live theatre, much higher than average in the 15-19 age group, drops to the average in the 20-24 age range, and decreases with advancing age. Those in the 65-69 age range attend almost as frequently as the younger theatre-goers. The participation rate generally increases with higher education. More women go to live theatre than men, and more often than men. A greater proportion of English-speaking Canadians attend than French-speaking Canadians. A small proportion of bilingual Canadians who go to theatre performances attend far more frequently than either their French- or English-speaking compatriots.

Just 20 years ago the Canada Council was funding 13 theatre companies and festivals. At last count there were more than 210 professional theatre companies in Canada and 172 of them received funds from the council.

The number of performing arts organizations fluctuates constantly. There are always organizations folding or coming into being. The data on 210 organizations published by Statistics Canada for 1981 include most of the major companies, as shown in Table 15.6.

For this annual survey the organizations included 133 theatre companies as compared to 114 in 1979, 48 music organizations (46 in 1979), 23 dance companies (20 in 1979) and six opera companies (six also in 1979).

During 1981 the 210 companies gave 27,040 performances to combined audiences of 9.69 million people. The revenues earned amounted to \$61.9 million. Grants from the public and donations from

private sectors totalled over \$67 million. These were supplemented by revenue from program sales, bar and concession sales, and other sidelines. More precisely, public grants accounted for 38% of all revenue for theatre companies, 35% for opera companies, 40% for music organizations and 43% for dance groups. In descending order the principal contributors were the federal government, provincial governments and municipal or regional governments. The level of private sector donations, in total, was between that of the provincial and municipal governments for theatre while in music, dance and opera it exceeded provincial grants.

On the expenditure side, personnel costs accounted for slightly less than 60% of the budget for theatre, dance or opera companies and rose to 74% for music groups. Publicity accounted for 8% to 9% of total expenses, and administration from 5% to 8%. Other production costs, such as for sets, costumes, props, technical equipment and tickets, accounted for 15% for theatre, 6% for music, 23% for dance and 16% for opera.

To make a valid comparison between 1980 and 1981, only data from companies surveyed in both years are shown in Table 15.7. These are 186 organizations comprising 115 theatre companies, 44 orchestras, 21 dance companies and six opera companies.

This subset of companies had almost the same total attendance in 1980 and 1981 although the number of performances declined by 3% in 1981. Expenses increased by 15% while earned revenue was up by slightly more than 16%. Increases in public subsidies of 13% resulted in an overall increase in total revenue of 14%. Expenses rising faster than total revenue resulted in an overall deficit for the 186 companies of 0.3% of operating expenses as compared to a surplus of 0.3% in 1980.

**Professional theatre** is the most prevalent of the performing arts in Canada. In 1981 more professional theatre companies gave more performances before more Canadians than all the professional music, dance and opera companies combined.

**Symphony orchestras.** Most major Canadian cities now support symphony orchestras. Several, including the Toronto, Montréal and Vancouver symphonies and the National Arts Centre orchestra, have achieved international status.

**Dance.** Three major Canadian dance companies, the National Ballet, the Royal Winnipeg Ballet and Les Grands Ballets Canadiens have been enthusiastically acclaimed. Recent years have produced several smaller professional groups usually called chamber or concert ballet companies, often comprised of lead dancers from the major companies.

**Opera** is the most limited of the performing arts in its sphere of influence, but this most lavish and

expensive of the arts has attracted growing numbers of devotees.

**Regional picture.** Activity in the performing arts is characterized by regional differences, influenced by Canadian geography and demography. Distribution of the population determines where performing arts companies establish themselves. Large cities offer the sustaining market as well as the creative climate, training ground and community of artists that foster development. But Canada's handful of large cities are strewn unevenly across the country.

If population concentrations are not sufficient to support performing arts organizations, those companies must seek out audiences. This means touring. In 1981 one in three theatre performances was given on tour, in music one in 10, and in dance and opera almost one in two.

Another dimension underlies touring. At the level of national policy, this first received formal recognition in 1968 with a federal government statement of support for democratization of cultural opportunities and decentralization of cultural resources. The aim was to ensure that as many Canadians as possible would have access to the performing arts. The touring office of the Canada Council has since helped many arts groups perform across Canada, often in quite remote communities.

One of the cultural roles of touring is to help different regions become more aware of each other, reinforcing a sense of the Canadian community.

**Economic picture.** The performing arts cannot earn enough money to meet expenses and depend on massive financial transfusions in grants and subsidies. This leaves them vulnerable to changing economic winds. Historically in times of economic retrenchment the arts have been the first to suffer funding cuts. Rising costs and declining subsidies double the jeopardy.

Earned revenue is the income a performing arts organization generates from its own operations, primarily from box-office sales but also from such other sources as guarantees and program and beverage sales at performances. Generally the price of admission is reasonable when compared to other consumer costs. Average earned revenues per spectator in 1981 were: theatre, \$5.81; music concerts, \$7.77; dance, \$5.87; and opera, \$9.71.

Costs are escalating as in all sectors of the economy. In the performing arts expenses are rising faster than revenues. In 1981 the average cost per theatre performance was \$2,869. For a music concert it was \$20,125, for dance \$10,383 and for opera \$15,064. The income earned by theatre companies represented 53% of total revenue. Opera earned 42% of its revenue. Both music and dance earned 43% of their total revenue. The balance was subsidized.

**Grants and subsidies** come from two main sectors, public (governments) and private. On average, grants

represented more than half (52%) the total revenue of performing arts organizations in 1981. Governments at all levels are the major benefactors. In 1981, 75% of all subsidies to the performing arts flowed from the public coffers. Of these 40% were federal, 27% provincial and 8% municipal. The remaining 25% came from the private sector. As government purse-strings tighten, private sector support is gaining attention. Main sources of private funds are foundations, corporations, individuals, fund raising campaigns by volunteer committees, bequests and endowments, bank interest and returns on investments. Nationally, the greatest private sector support in 1981 was from individuals, followed closely by corporations.

### 15.3.1 National Arts Centre (NAC)

Parliament passed the National Arts Centre Act in 1966 creating a corporation to operate and maintain the centre, to develop the performing arts in the national capital area, and to assist the Canada Council in the development of the performing arts elsewhere in Canada. The centre, opened to the public in May 1969, stands on Confederation Square in the heart of Ottawa, a series of hexagonal halls built on landscaped terraces along the Rideau Canal.

The NAC has three main halls. The Opera, with 2,300 seats, was designed primarily for opera and ballet, with a full-size orchestra pit and advanced sound, lighting and other technical equipment. Its stage is one of the largest in the world, 56.7 by 33 metres, and its facilities can handle the most complicated changes required by touring companies. The 950-seat Theatre is ideal for Greek, Elizabethan or contemporary plays, and its stage can be adjusted from the conventional to the thrust stage style used for Shakespearean drama. Like the Opera, it is equipped for television, simultaneous translation and film projection, and its technical facilities are among the best available. The Studio is hexagonal and can seat up to 350 persons in a variety of seating plans. It is used for theatre productions, conferences and cabarets.

Other NAC facilities include: the Salon, a small hall seating up to 150 persons and used for chamber concerts, poetry readings and receptions; a 900-car indoor garage; Le Restaurant, a restaurant and bar; Le Café, a smaller restaurant which in summer overflows to the sidewalks along the Rideau Canal; and several large rehearsal halls. On the terraces outside, the NAC plays host to art fairs, craft markets and summer band concerts.

The 46-member National Arts Centre orchestra gives concerts in the centre and on tours in Canada and abroad. Music programming includes about 80 concerts a year, featuring soloists and guest orchestras from Canada and around the world.

The theatre department has offered more than 600 performances of live theatre annually at the centre

and on tour. Some plays represent Canada's regional theatre or come from outside the country.

The dance and variety department brings in some 100 different shows a year. The NAC is the only centre in Canada where every major Canadian dance company appears. It has been a showcase for performers from every part of the country. Each July a festival of mainly musical entertainment is presented. Altogether, in about 900 performances annually the NAC entertains over 700,000 people.

## 15.4 Support for the arts

### 15.4.1 Federal support to the arts

The federal government spent about \$1.3 billion on culture, in 1981-82 representing approximately 1.8% of total expenditures. The Canadian Broadcasting Corp. (CBC) alone accounted for almost two-thirds of this amount. Discounting inflation, the federal spending on culture was up about 1% in real terms. In constant dollars, spending on film and literary arts decreased while heritage resources, visual arts, crafts and sound recording reported increases.

The environment department had the second largest budget for culture (7.1% of the total). Most of the funds were spent on historic parks and sites. In descending order the National Film Board at 5.3%, National Museums of Canada at 4.8%, and the Canada Council at 4.6% reported the next largest budgets of culture expenditures.

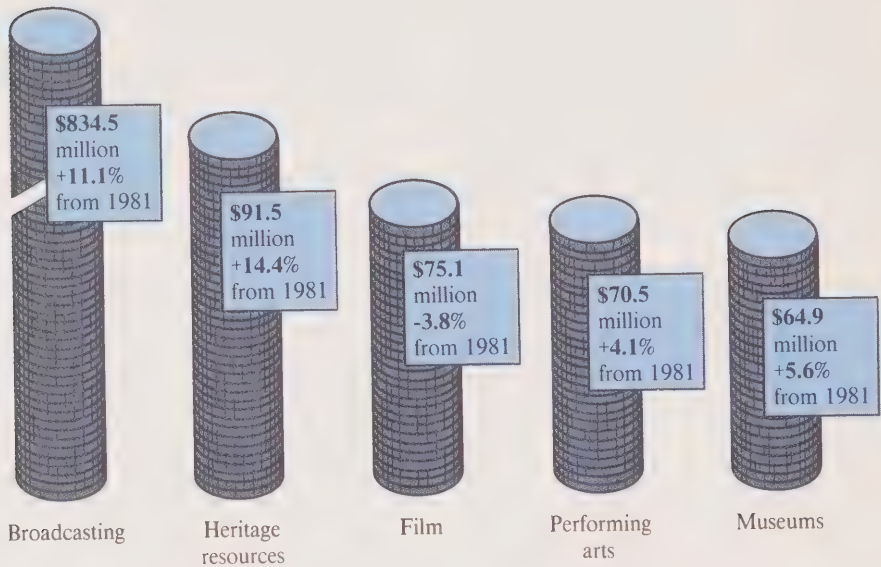
The communications department was the only other department to have a significant budget for culture (2.6%).

### 15.4.2 The Canada Council

The Canada Council was created in 1957 by an act of Parliament to foster and promote the study and enjoyment of, and the production of works in the arts, humanities and social sciences. Under the provisions of the Government Organization (Scientific Activities) Act passed by Parliament in June 1977, the council's work in the humanities and social sciences became the responsibility of a new body, the Social Sciences and Humanities Research Council, in April 1978.

The Canada Council offers financial assistance and services to individuals and organizations in the arts including the maintenance of a touring office and an art bank, which purchases and rents Canadian art for use in offices of government and non-profit organizations. The council's Explorations program funds innovative projects which address new needs or investigate new directions in art forms. The council administers the Killam program, based on a bequest from Mrs. Dorothy J. Killam. This program provides an annual Izaak Walton Killam prize of \$50,000 and the I.W. Killam research fellowships given to scholars of exceptional ability engaged in projects of cultural significance.

Chart 15.1

**Major federal expenditures for arts and culture, 1982**

The council enjoys a large measure of autonomy. It sets its own policies and carries out its own programs in consultation with the artistic community, represented by an arts advisory board and advisory committees of Canadian artists in many disciplines. Artists and arts-related professionals serve on council juries and selection committees. The council co-operates closely with federal and provincial cultural agencies and with a bureau of international cultural relations of the external affairs department.

The council has three sources of income: an annual parliamentary grant, \$65.5 million for the year ended March 31, 1984; interest from an endowment fund established by Parliament in 1957; and private funds willed or donated and used in accordance with the wishes of the donors.

In 1982-83 the council disbursed over \$60.7 million in grants and services, over \$7.5 million of the total going to individual artists. By category, over \$14.2 million went for music and opera, nearly \$14 million for theatre, over \$8.7 million for dance, \$7.7 million for visual arts and photography, \$3.3 million for film, video, audio and performance art, and almost \$10 million for writing, publishing and translation. In 1982-83, awards made under the Killam program totalled \$1.2 million.

Programs funded by the federal government or external sources and administered by the council include grants to Canadian cultural organizations for visits to Canada of distinguished foreign artists, and provision of studio space for Canadian visual artists in New York and visual and musical artists in Paris. The council also administers and finances travel grants for Canadians serving as senior officers or board members of international non-government arts organizations.

The Governor General's literary awards of \$5,000 financed by the council are awarded each year to eight Canadian writers for the best English-language and French-language works in four categories: fiction, poetry, drama and non-fiction.

The council annually awards two \$50,000 prizes from the Molson Foundation for outstanding contributions in the arts, humanities and social sciences. The number and worth of these prizes has varied since they were founded in 1964 as the result of a bequest from the Molson Family Foundation. Two translation prizes of \$5,000 each are given annually for the best English and French translations of Canadian works. Four children's literature prizes of \$5,000 each are given to Canadian writers and illustrators of the year's best English and French books for young people. Co-sponsored by their

respective governments and the Canadian government, a Canada–Australia literary prize, a Canada–Belgium literary prize and a Canada–Switzerland prize are awarded in alternate years to a writer from each country. The council administers or provides the funds for the Jules Léger prize for new chamber music, the Healy Willan prize for amateur choirs, the Sylva Gelbier Foundation award, and the Virginia P. Moore awards, the last two for classical music performance.

The council provides the budget and secretariat for the Canadian Commission for UNESCO (United Nations Educational, Scientific and Cultural Organization). The commission serves as a non-political liaison agency between UNESCO and Canadian public and private bodies and carries out a modest domestic program to further UNESCO objectives. The council also has some responsibility for promoting Canadian culture abroad.

#### 15.4.3 Provincial aid to the arts

Provincial governments spent a total of about \$805.1 million on culture in Canada in 1981–82. Libraries alone accounted for almost half of this amount. On average, provinces spent about 1.2% of their budgets on culture, ranging from 0.9% in Newfoundland and Nova Scotia to 1.4% in Prince Edward Island. The provinces with the largest cultural expenditures did not necessarily have the highest per person expenditures. For example, Ontario reported the largest expenditures, but it did not have the highest expenditures per person.

**Newfoundland.** The culture, recreation and youth department operates arts and culture centres at St. John's, Gander, Grand Falls, Corner Brook and Stephenville, an annual arts and letters competition and a grants and awards program. A Newfoundland and Labrador Arts Council commenced operations in 1980. It provides funding for amateur and professional arts organizations and artists.

In the arts and culture centres, provincial, national and international companies and individual artists perform during the fall and winter theatrical seasons. A small acquisition fund enables the province to add works by Newfoundland visual artists to its permanent collection.

**Nova Scotia.** The culture, recreation and fitness department is responsible for cultural development, including music, theatre, crafts, multiculturalism, festivals, arts councils, dance, visual arts, literary arts, film and photography, the art bank and art gallery of Nova Scotia. The department supports eight cultural federations which act as service agencies for arts and cultural programs.

**In New Brunswick** a cultural development branch gives grants to individuals and organizations to provide cultural opportunities to residents and to develop the performing, literary, and visual arts.

Individuals may apply for arts awards to further their studies and for travel grants to attend conferences and workshops. Their works may be purchased by the provincial art bank.

Organizations may apply for sustaining grants to maintain their programs and for separate project grants. Eligible organizations include theatre companies, dance companies, musical ensembles, galleries, publishers, community arts councils, arts federations, and arts schools. Regional fairs and festivals with a creative arts component may also apply. Some money is available for capital improvements, special purchases, and installations for performances and exhibitions.

**Quebec.** The cultural affairs department concentrates on books and other printed material, conservation and development of cultural properties, visual arts, and performing arts.

A book program promotes literary creation and production, and distribution of Quebec writing. The program assists publishing and sale of books, develops a network of public libraries, and makes accessible the Quebec literary heritage through the National Library of Quebec.

Technical assistance and expertise are provided to preserve and develop the historical heritage including archives, historical and archeological sites, and cultural properties.

A visual arts program operates the Musée du Québec and the Musée d'art contemporain, assists private museums and promotes visual arts and creativity.

A performing arts program trains professionals in music, theatre and dance and provides funds to about 100 cultural organizations.

**Ontario.** The ministry of culture and recreation allocates grants to: the Ontario Arts Council, various museums and galleries and the Ontario Science Centre to encourage the pursuit of excellence and promote wider participation in arts activities.

A cultural industries branch sets policies of assistance for the film, recording and publishing industries which are concentrated mainly in Toronto.

A heritage conservation division supports the Ontario Heritage Foundation and administers Huronia Historical Parks including Sainte-Marie among the Hurons at Midland and the historic naval and military establishments at Penetanguishene, and Old Fort William.

**The Manitoba Arts Council** provides support to arts organizations and individual artists in dance, music and opera, theatre and the visual and literary arts through programs for arts exposure, creative arts, student aid, touring, operating grants and special projects.

The council formulates policy, establishes priorities and considers applications for assistance. Outside advisors and jurors are regularly consulted.

**The Saskatchewan Arts Board** gives Saskatchewan people opportunities to engage in drama, the visual arts, music, literature, crafts and other arts. The arts board is autonomous, funded by the provincial government, earned revenue and donations. Two widely-known arts board projects are a school of the arts, and a permanent collection of arts and crafts by provincial artists.

**Alberta Culture** offers grants to organizations, public art galleries and individuals. Art distribution programs help Alberta artists and craftsmen to have their work exhibited. Travel grants help individuals and groups to take part in festivals, competitions, conferences and study tours. Community organizations may apply for interest-free loans to buy arts and crafts equipment.

A performing arts branch encourages dance, drama and music. Residential summer schools include courses in drama at Drumheller and Fairview and music at Camrose. Development of Alberta writers is encouraged in courses, workshops, competitions for playwrights and new Alberta novelists, scholarships and grants for authors. Annual awards are given for non-fiction and local history books. Funds for publishers and nominal grants to periodicals encourage Alberta literary output.

A library services branch helps set up community library systems. A cultural heritage branch promotes understanding of cultural diversity.

**The British Columbia Cultural Fund** was set up by statute in 1967. The act set aside \$5 million in an endowment fund; the interest was to be spent to stimulate the cultural development of BC people. An advisory committee was established to receive applications for cultural grants and to report their recommendations to the finance department. The amount of the endowment was raised to \$20 million in 1974. An advisory body, the British Columbia Arts Board, makes recommendations to the provincial government on the allocation of grants from the fund. Interest revenues from the endowment are supplemented with monies from the British Columbia Lottery Fund.

#### 15.4.4 Canadian Conference of the Arts

The Canadian Conference of the Arts was established in 1945 as a national, non-governmental, non-profit association to "ensure the lively existence and continued growth of the arts and the cultural industries in Canada."

Conference membership of over 700 organizations and associations includes a wide spectrum of artistic and cultural associations, organizations and institutions. Individual membership includes artists, arts administrators, educators, and other concerned arts supporters.

The conference endeavours to strengthen public support and enhance public awareness of the role and value of the arts. In short, it is an arts-based advocate for the arts.

### 15.5 Museums and galleries

Museums of Canada range from collections of local historical artifacts and objects to large government-operated institutions. Many larger museums, especially the components of the National Museums of Canada and the Royal Ontario Museum, are distinguished for research and publication of scholarly works and as cultural centres. They offer many services through exhibits, guided tours, lectures and scientific and popular publications.

Work with schools may involve classes in the museum or visits to the schools by museum lecturers with exhibits, guided tours for visiting classes, loans of materials to schools, and training student-teachers in use of the museum. For children, a number of museums have Saturday lectures and film showings, nature clubs and field excursions. Museum field parties provide research training to university students, and museum staff act as professional consultants to foreign scholars and institutions.

For adults, museums offer lectures, film shows and guided tours. Staff members give lectures to service clubs or other groups, and hobby clubs such as naturalist groups, mineral clubs and astronomy societies, which may use the museum as headquarters. Travelling exhibits are prepared for local fairs, historical celebrations and conventions. Some Canadian museums have regular radio or television programs. Some historical museums stage annual events to demonstrate arts, crafts or industries represented by the exhibits.

Public art galleries and art museums in the principal cities conduct Saturday classes and tours for school pupils and adults. Radio talks, lectures and concerts are provided by various galleries as well as travelling exhibitions for their surrounding areas. Several galleries maintain an art rental service. Table 15.8 gives the number of art galleries and museums and their location by region.

#### 15.5.1 National Museums of Canada

The National Museums of Canada, a Crown corporation established in 1968 by the National Museums Act, incorporates in a single administration Canada's four major national museums, affiliated with a nationwide network of associate museums and exhibition centres. It administers a series of programs with main purposes to preserve and increase access to the treasures of the national heritage.

The four national museums in Ottawa are: the National Gallery; the National Museum of Man, which includes the Canadian War Museum; the National Museum of Natural Sciences; and the National Museum of Science and Technology, including the National Aviation Museum. The national museum policy aims to increase public access to the collections and to help preserve them. The National Museum of Man and National

Museum of Natural Sciences are served by the corporation's 200,000-volume library system.

In February 1982 a Canada Museums Construction Corp. was formed to construct two new buildings to contain the National Gallery and the National Museum of Man. A federal allotment of \$186.6 million was equally divided between the two projects.

Montréal architect Moshe Safdie was asked in February 1983 to design the new building of the National Gallery. The Toronto firm Parkin Partnership will oversee its construction. The new building is scheduled to open in 1988 at the intersection of Sussex Drive and St. Patrick Street in Ottawa's historic Byward Market area.

For the new National Museum of Man the government approved an architectural design by Douglas J. Cardinal of Edmonton in co-operation with Les architectes Tétreault, Parent, Languedoc et Associés of Montréal which was unveiled to the Canadian public in November 1983. Construction was to begin in early 1984, in Parc Laurier, Hull, Que. and it was expected that the new museum would be open to the public in 1988. The new building will give four times the exhibition space now available in the Victoria Memorial Museum Building for its archeological, ethnographic, folk-art and history collections.

**The National Gallery of Canada** associated with the founding of the Royal Canadian Academy of Arts in 1880 was incorporated by an act of Parliament in 1913. Its function was to encourage public interest in the arts and to promote the interests of art throughout the country.

The gallery's collections, ranging in time from the 12th century to the present, have developed along national and international lines with Western European art chosen to illustrate some of the roots of Canada's own civilization and the largest and most comprehensive collection of Canadian art in existence. Of the 40,000 works of art in the collections, 16,000 are Canadian. Many old masters are included in the gallery's European collection. Some Chardins, a Rembrandt and a Rubens were acquired from the famous Liechtenstein collection. The Massey Foundation presented its collection of English painting to the gallery in the late 1940s and the Vincent Massey bequest of 100 works by Canadian artists was received in 1968. Other gifts and bequests include the Bronfman gift of drawings (1973), the Henry Birks collection of Canadian silver (1979), the Max Tanenbaum collection of Indian and Tibetan art (1979) and the Phyllis Lambert gift of Walker Evans photographs, bringing the National Gallery's collection of photographs to 15,500 works.

Visitors may view special exhibitions and permanent installations, attend lectures, gallery talks, films, guided tours and special performances. Cana-

dians are encouraged to benefit from the gallery's circulating exhibitions, lecture tours, publications and reproductions. The gallery participates in international exhibitions and prepares major exhibitions of Canadian art in collaboration with the external affairs department. It also brings exhibitions from abroad to Canada.

**The National Museum of Man** conducts research in Canadian studies and collects, preserves and displays objects which reflect Canada's cultural heritage. Activities extend across the country through field research programs, publications, travelling exhibitions and loans to groups and institutions. Staff includes archeologists, ethnologists, anthropologists, historians, folklorists, musicologists, curators and specialists in various other museum disciplines.

Eight permanent exhibition halls and one gallery for special exhibitions are in the Victoria Memorial Museum Building in Ottawa. The military history collection is in the Canadian War Museum.

Exhibition halls show historical progression and continuity: man's development and universal patterns of existence from early times to the modern era, archeological research of prehistoric man in Canada, the Inuit of Canada's far North, the Iroquois in the region of the Great Lakes and St. Lawrence River, Indians of the central plains and of the northwest coast. Two other permanent halls depict Canada's multicultural heritage and such themes as settlement, immigration and resource development.

**The National Museum of Natural Sciences** has six divisions: botany, invertebrate zoology, vertebrate zoology, mineral sciences, paleobiology, and public services.

Large reference collections are available for research projects. The national herbarium contains vascular plants, mosses and liverworts, lichens and algae. Zoological collections include molluscs, crustaceans, other invertebrates, fishes, reptiles, amphibians, birds and mammals. A Zooarcheological Identification Centre deals with animal remains found in archeological and biological investigations. This service can determine an animal species from a fragment of bone, and is of use to researchers in both natural and human history.

Geological collections include minerals, gemstones, rocks and ores, among them many outstanding display specimens.

Vertebrate fossils include the largest gathering of Canadian dinosaurs in the world. Paleontological activities have focused on dinosaurs of the Cretaceous period in Alberta and on the Pleistocene fauna of Yukon. The new science of palynology, the study of fossil pollen and spores, is determining environmental conditions of the past, and contributes to such areas of research as hay fever and honey grading.

A public services division provides interpretive support for school visits, permanent, temporary and

travelling exhibitions and free scientific and popular papers related to the natural sciences. The division also presents lectures, films, workshops and interpretive lessons.

Natural history halls explain the continental drift theory and the natural forces that have shaped the world, and show how plants and animals have adapted to changing circumstances through geological times. Dioramas feature birds typical in nine major biological regions, animal evolution through 500 million years, the biology of plants and their geographic distribution in Canada.

**The National Museum of Science and Technology** has had some 8 million visitors since it opened in 1967. It presents scientific discoveries and technological advances to give visitors a sense of participation in and proximity to the exhibits. In the physics hall, for example, they can perform experiments and test their physical abilities and dexterity.

Exhibits focus on ground transportation, aviation and space, ships, communications, astronomy, meteorology, time pieces, computers and agriculture. An agriculture section was expanded in late 1983 with the addition of two new exhibit halls on the upper floor of the dairy barn in the central experimental farm in Ottawa. Displays there are "Haying in Canada" and "An Ontario barn in the 1920s".

The museum's public programs and educational activities include daily demonstrations, guided tours and interpretive programs on about 30 topics and an evening astronomy program in which participants view the stars through Canada's largest telescope. The museum issues publications (pamphlets and monthly sky charts, for example), takes part in agricultural fairs and air shows, and operates popular steam train excursions during the summer with the National Capital Commission. The museum has a specialized library of about 20,000 books, journals and reference works.

Visitors interested in aviation may tour the national aeronautical collection at Rockcliffe airport. It contains about 100 aircraft, along with a collection of historic engines and other artifacts illustrating the evolution of the flying machine in peacetime and in war and its place in Canada's development.

### 15.5.2 National programs

The Canadian Conservation Institute (CCI) through a central laboratory in Ottawa and a mobile laboratory program, provides services to publicly-owned museums and art galleries across Canada including: analysis and treatment of artifacts, applied research and development, training, information and advice to the museum community and to other levels of government on conservation matters.

A Canadian heritage information network program develops standards for recording and documenting museum collections, provides services

to museums to assist them in documenting their collections, and applies computer technology to collections management. The objective is to create a national inventory of public collections. The service uses a computer with terminals in 35 locations from Victoria to St. John's; 150 institutions participate.

An international program assists Canadian museums and galleries in sending exhibitions abroad and negotiates and circulates foreign exhibitions in Canada.

Museum assistance programs (financial and technical) help institutions to increase access to heritage collections across Canada and to ensure that the collections are preserved. Financial assistance and technical advice is provided to associate museums, national exhibition centres, specialized museums; and for conservation, exhibitions, registration, special activities, training and upgrading and equipment projects. The grants budget for 1983-84 was \$8.4 million, down from \$8.7 million in 1982-83 and \$8.9 million in 1981-82.

A mobile exhibits program carries artifacts and related materials to smaller communities which lack access to major museums and galleries. Each museumobile caravan consisting of three 14-metre trailers depicts the geographic, archeological, social and natural history of a region of Canada. Museumobiles in operation are: Canada North, Canada West and Atlantic Canada.

## 15.6 Books

### 15.6.1 Book publishing

The book market in Canada includes books produced by Canadian publishers for domestic sale and books imported for sale in Canada. Estimated sales from all publishers, exclusive agents and other importers reached \$1,028 million in 1981, of which 74% came from imported books. Canadian-based publishers produced an estimated \$382 million worth of books, including \$112 million in export sales. The value of Canadian publishers books increased by 7% between 1980 and 1981, while the value of books imported into Canada increased by a larger proportion, 12%.

Information collected from 188 publishers surveyed by Statistics Canada showed that sales of their own books reached \$355 million, including domestic sales of \$245 million, from the publication of 4,875 new titles and 3,212 reprinted titles. English-language books accounted for 82% of the sales revenue, French-language books for 18%, and bilingual and other language books for less than 1% of total sales. Tables 15.9 and 15.10 provide data on new books published in Canada in 1980 and 1981.

**Textbooks** of all educational levels (primary, secondary and postsecondary) made up about 20% of all new titles released in 1981. More than half of all new elementary-secondary textbooks dealt with

basic subjects such as mathematics and language instruction. Most postsecondary textbooks were in business management. The median price of textbooks was \$8.95. Some textbooks were published in hardcover format, but the majority (68%) were paperbacks.

**Tradebooks.** Nearly 2,600 new tradebooks were published in 1981, capturing more than a two-thirds share of all new titles. Most of them were destined for the adult market, with the split between fiction and non-fiction being almost even. Novels were the most popular tradebook published but books in the entertainment field were numerous. The median retail price was \$8.25. Almost half of all tradebooks were mass market paperbacks, although the larger paperback format was often used.

**Information books.** This category combines reference books (such as dictionaries), scholarly works and manuals dealing with professional and technical subjects. Information books made up slightly more than 10% of all new titles published in 1981. The median retail price was \$15.00. Of all types, these books were most often published as hardcover books. They covered such areas as law, general subjects and literary history.

**Languages, authors and prices.** Of all new books in 1981, 12% were translated versions of previously published books, and 10% were adapted forms of other texts. The majority of translating activity in 1981 was from English-language originals to French-language translations but 15% of translations were from foreign-language texts.

Books published in Canada are written by both Canadian writers and non-Canadians. In 1981, 72% of new English books had been written by Canadian authors and 87% of French books had Canadian citizens as authors.

Overall, median retail prices varied widely depending on the format: mass market paperbacks cost a median \$3.50, other paperbacks sold for \$7.50 and hardcover books had price tags of about \$14.75.

**Copyright protection** is governed by the Copyright Act (RSC 1970, c.C-30) in force since 1924. Protection is automatic without any formality, but a system of voluntary registration is provided by the federal consumer and corporate affairs department. Copyright exists in Canada in every original literary, dramatic, musical and artistic work and in contrivances by means of which sounds may be mechanically reproduced. The term for which the copyright exists is, except as otherwise expressly provided by this act, the life of the author and a period of 50 years after death.

### 15.6.2 Reading habits

In general terms, four in 10 Canadians read books in an average week. Seven in 10 read books at some time during a year. Age and education are primary

influences on reading habits. Generally the proportion who read books decreases with age. For the 15-24 age group the reading participation rate is well above average. There is a steady decline toward the average and below it in the 25-44 age group. Participation falls off rapidly from the age of 55 to 70 and more. At all ages the proportion who read books is larger among those with higher education. These highlights were extracted from replies of a representative sample of Canadians in the survey of leisure activities conducted with the Statistics Canada labour force survey in February 1978.

In Canada as a whole, 71.9% of people read books for leisure, ranging from 65.9% in Quebec to 80.1% in British Columbia. Among all book readers, the time spent reading is fairly consistent regardless of their level of education. It varied from 5.7 hours a week in Quebec to 7.1 in British Columbia, with an average of 6.2 across Canada.

Among the respondents, more women than men read books. Almost 50% of women read books regularly and just over 35% of all men. Only 6% of all the people surveyed said they read Canadian fiction regularly, and only 8% read Canadian non-fiction regularly, indicating the reliance on imports described in the section on book publishing.

## 15.7 Public archives and library services

**The Public Archives of Canada**, established in 1872, operates under the direction of the dominion archivist by authority of the Public Archives Act. As a research institution, it is responsible for acquiring all nationally significant documents relating to the development of Canada, and for providing research services and facilities to make this material available to the public. Administratively, it promotes efficiency and economy in the management of government records.

The archives branch has eight divisions. The manuscript division includes the private papers of statesmen and other distinguished citizens, records of cultural and commercial societies, and copies of records on Canada held in France, England and other countries. The federal archives division consists of records of all the departments and agencies of the federal government. The picture division contains documentary paintings, prints, watercolours, and engravings, as well as heraldry and medals. The national photography collection includes historical photographs. The national film, television and sound archives holds films and sound recordings. The national map collection has custody of maps and plans pertaining to the discovery, exploration and settlement of Canada and its topography, as well as current topographical maps of other countries. An archives library contains more than 80,000 volumes on Canadian history, including pamphlets, periodicals and government publications. A

machine-readable archives division holds selected automated public records and machine-readable archives of permanent value from the private sector.

Documents may not be taken out on personal loan, but may be consulted in the archives building. A 24-hour-a-day service is provided for accredited researchers. Reproductions of material are available for a moderate fee. Many documents on microfilm may be obtained on interlibrary loan. Archival material is also presented on microfilm, slides and microfiche, in publications and in travelling exhibitions.

A records management branch helps federal departments and agencies in their own records management. At records centres in major Canadian cities, it provides storage, reference service and planned and economical disposal of dormant records.

Branch offices of the Public Archives of Canada are in London, England and Paris, France. The archives also administers Laurier House, the former residence of Sir Wilfrid Laurier and Rt. Hon. William Lyon Mackenzie King, in Ottawa as a historical museum.

**The National Library of Canada**, established in 1953, now operates under the National Library Act of 1969 and its amendments. Legal deposit regulations require that two copies of most current Canadian publications be deposited with the library. In 1983 Dr. Guy Sylvestre, director of the library since 1968, retired. Under his leadership the library had made many advances in development of collections, services to users and use of new technology to enhance service and promote interlibrary co-operation.

The national library supports Canadian studies with extensive collections of Canadian books, periodicals, newspapers, government documents, microform and non-book materials. Foreign materials in the humanities and social sciences complement its Canadian holdings. In 1983 the library had more than 900,000 volumes of monographs, microcopies of over 1 million additional titles, including Canadian theses, more than 120,000 issues of periodicals, the largest collection of Canadian newspapers in Canada, close to 2 million official publications, and an extensive collection of Canadian music scores, recordings and manuscripts.

The library issues *Canadiana*, the national bibliography, in microfiche and tape versions as well as in print. It is searchable on-line through the CAN/OLE system of the Canada Institute for Scientific and Technical Information.

The library facilitates the use of the nation's total library resources on interlibrary loan. A Canadian union catalogue, key to the main library resources of the country, lists about 5.5 million volumes in almost 350 university, public, government, and other

special libraries. There were about 430,000 new accessions in 1981-82 and about 700,000 in 1980-81, all of them now entered on the library's automated data base. In 1983 work was begun on a union catalogue of special format materials such as Braille, and talking books for print-handicapped individuals in Canada.

An office of network development promotes the interconnection of data bases for access to resources nationwide. International programs facilitate the exchange of bibliographic data between countries.

The library's reference and consultation services provide back-up to other Canadian libraries in social sciences and the humanities. These services are also available to individual researchers who require access to the library's resources or staff expertise in such areas as music, conservation, Judaica, library science, Indian rights and Canadian children's literature.

The library provides, to provincial library agencies, loan collections of books in languages other than English and French, and assists Canadian libraries to develop their collections through a book exchange centre. For Canadian researchers without access to computerized search services, the library provides, for a minimal charge, both a current awareness service in the social sciences and humanities and retrospective bibliographies prepared from machine-readable data bases. National library services are in both official languages.

A list of books about Canada, prepared by the national library, is published in Appendix 6.

**Public libraries** are organized under provincial legislation which specifies the method of establishment, the services to be provided and the means of support. Municipalities may organize and maintain public libraries or join together to form regional libraries according to provincial legislation. Provincial public library agencies advise local and regional libraries and distribute grants.

Table 15.12 gives preliminary statistics of Canadian public libraries from annual surveys. In 1981 a total of 3,159 public library service points indicated that they held about 48 million books, reported around 132 million direct circulations, employed 1,882 full-time professional librarians, and spent about \$295 million for their total operations.

## 15.8 Canadian films

### 15.8.1 National Film Board (NFB)

The NFB was established by an act of Parliament in 1939 and reconstituted by the National Film Act in 1950 to initiate and promote the production and distribution of films in the national interest.

The NFB has produced over 5,400 films depicting events that shaped history and showing the diversity of Canadian concerns and achievements. The board's films are produced in Canada's two official languages.

Often many are still in demand 10 to 20 years after their release. Head office is in Ottawa, with operational headquarters in Montréal and production resources in regional centres across Canada. Connecting links were set up between the centres and local media, cable television companies, educational establishments, local cultural and film circles and provincial governments. A feature of regional activity has been a substantial involvement of private production companies, providing access to local creative and technical resources.

NFB films are distributed in 16 mm or 35 mm. All films are being transferred to video cassettes which are sold by the NFB in the education and industrial markets, and are distributed through home video outlets.

The board produces other visual aids such as silent and sound filmstrips, slide sets, overhead projectuals, multi-media kits and photo stories. In Canada these are distributed through community outlets, schools and universities, television stations, theatres and commercial sales. A large part of the 16 mm non-theatrical film audience is reached through film libraries, film councils and special interest groups. During 1982-83 community film distribution through NFB libraries in Canada rose to 523,131 bookings, up from 510,052 in 1981-82.

NFB films are seen outside Canada on television, in theatres, in schools and in libraries, distributed from NFB offices in New York, Chicago, London and Paris. Community distribution abroad is also effected by 100 film libraries operated jointly with the external affairs department. For international distribution, many NFB films are versioned in foreign languages. The board, in co-operation with Tourism Canada, also distributes films supporting the travel industry.

In 1982-83 the NFB produced 205 new films, 66 of them under a government sponsor program, and 98 under a co-production program. Each year, NFB films are presented at many national and international film festivals.

### 15.8.2 Telefilm Canada

This corporation, formerly known as the Canadian Film Development Corp. was established in March 1967 to promote the development of a feature film industry in Canada. The corporation was asked in 1983 to administer a multi-million dollar Canadian broadcast program development fund, making it the federal government agency responsible for private sector development in both television production and film industries.

The corporation does not produce or distribute programming itself. It carries out its mandate by working with individual production, distribution, and exhibition companies, as well as with federal and provincial government ministries and cultural agencies.

The Canadian broadcast program development fund is intended to promote an increase of high quality Canadian television productions in drama, children's programming and variety. More than \$250 million was earmarked to support the private sector television production industry in Canada including \$34 million in 1983-84, the first year of operation, with increases to \$50 million, \$54 million, \$56 million, and \$60 million in the years following.

Telefilm Canada may loan or invest up to one-third of the Canadian part of the budget of a given production deemed to be of high quality, attractive to peak viewing audiences, and, where appropriate, internationally attractive.

To be eligible a program must meet the Telefilm Canada standards for Canadian content and must have a Canadian broadcaster guarantee to air the program within two years of its completion. For purposes of the fund, Canadian over-the-air broadcasters are the CBC/Radio-Canada and all private Canadian over-the-air networks or stations.

**Other assistance.** Telefilm Canada offers a script development program to encourage screenplays by Canadian writers for feature films and TV drama. An interim financing program allows producers to begin production before all equity financing is in place. An equity investment program encourages production of fiction or documentary films of a distinctly Canadian nature.

**Co-productions.** Canada has co-production treaties with five countries: France, Israel, Italy, the Federal Republic of Germany and the United Kingdom. Producers from two or more countries may share in the creative, technical, and financial aspects of a production, at the same time enjoying the benefits accorded a national production in each country, such as direct aid, tax incentives, and quota systems.

Telefilm Canada is responsible for these treaties and the projects produced under them. The corporation receives and evaluates project applications and advises the minister of communications on all official co-productions, but does not necessarily participate financially. The corporation's participation is based on a more detailed analysis of the merits of the production.

### 15.8.3 Film statistics

**Production activity.** Owing to the increased accessibility of video technology and television importance in the Canadian film industry, videotape production surpassed that of film in 1981. For the first time in recent years, videotape represented over half (52%) of all production.

**Theatrical features.** A total of 561 new feature films was distributed to movie theatres during 1981. This was a drop of about one-third from the 1980 total of 821. Theatrical features originating in Canada numbered 36, and were chiefly handled by

Canadian-controlled distributors. Of the balance, 196 came from the United States, 110 from France, 70 from Italy, 54 from Hong Kong, 38 from India, 23 from Germany, 13 from Britain, and 21 from other countries.

**Movie theatre attendance.** Over 85 million admissions at regular movie theatres generated an estimated \$279 million at the box office in 1981, while over 11 million visits represented \$41 million in drive-in admission receipts. Canadians went to a regular theatre 3.5 times per capita in 1981, and spent about \$4.05 each time. Although drive-ins were frequented only 0.5 times per capita, the average amount spent there each time was higher at \$5.35.

## 15.9 Home entertainment and recreation

**Communications services.** Almost all Canadians have access to television, radios and telephones. Of 8.25 million households in Canada in May 1982, 98.2% had television sets, 98.8% had radios and 97.9% had telephones (Table 15.16). While there had been an increase of 2.4% in the number of households in a year, there had been overall increases of 4.9% of those that had acquired colour television, 8.1% in households connected to cable television and 2.8% among those with radio receivers.

**TV viewing.** The average Canadian spends 50% more time watching television than on any other leisure activity. Television, since its introduction to the commercial market, has been the major vehicle of popular culture. The wide range of programming — including sports, movies, news, public affairs, situation comedies, game shows and commercial messages — both reflect and mould viewer attitudes.

A decline in movie attendance in the last 25 years can be directly attributed to television entertainment. This includes movies normally seen in motion picture theatres as well as made-for-television movies. Less frequently televised are live performing arts events such as plays, operas, ballet and music concerts. While TV may not render them with quite the atmosphere of a concert hall or theatre, a greatly enlarged audience can enjoy seeing them at home. Television has also cut into areas that were formerly the preserve of radio; newspapers and news magazines.

**Canadian time use pilot study, 1981.** A time use pilot study was conducted in a non-random selection of urban and rural areas across Canada. This stage in the development of Canada's first national time use survey has provided new insights into the daily activities of Canadians, especially leisure time and cultural activities.

A time use survey details what people do during the day, how often, for how long, at what time, where, with whom, in what order and while doing

what else simultaneously. The following small sampling of pilot study results illustrate the detailed analysis possible.

Pilot study respondents spent, on average, 5.3 hours a day on leisure activities. The only major activity on which they spent more time was sleeping, 8.3 hours a day.

Respondents classified simultaneous activities as primary or secondary. For example, 95% of radio listening was reported as secondary, a background to such activities as eating, travelling to work or reading.

As would be expected, respondents spent 20% more time on leisure activities on weekends than on weekdays. Newspaper reading did not follow this pattern, as more time was spent reading newspapers on Wednesdays and Fridays than any other days.

Time use surveys also provide details on the distribution of activities through the day. For example, radio listening generally decreased from morning to evening with peaks at 8:00 a.m. to 12 noon, and 5:00 p.m.

Location and social contexts of activities are also evident. Almost half of all listening to records, tapes and radio occurred away from home. Over half of television viewing time took place in the company of family members.

These and other dimensions of a time use survey data base can be combined to allow detailed analyses. As an illustration, the group of respondents most frequently participating in leisure activities at 7:00 p.m. were at home, alone, 55 years of age and over and had no children living at home. Of this group, 75% were involved in media activities.

**Phonograph records and tapes.** In the 1981 Canadian time use pilot study, respondents 15 years old and over listened to recorded music regularly, averaging about 2.2 hours a week. Respondents listened to the radio for an average of 15 hours a week, and about 75% of FM radio air time is comprised of music transmitted from records and tapes. CRTC regulations required that a minimum of 30% of the musical compositions broadcast by AM radio stations or network operations must be Canadian. To qualify a composition must meet at least two of the following conditions: instrumentation or lyrics principally performed by a Canadian, music composed by a Canadian, lyrics written by a Canadian or the live performance wholly recorded in Canada.

The 1981 survey showed that Canadian-controlled firms released two-thirds of all Canadian content albums and over half of Canadian content singles. Their total releases are divided between three main musical categories: adult-oriented popular music, rock and country music.

On the other hand, foreign-controlled firms released nearly all the classical and jazz recordings, though with a great emphasis on rock music. These

companies generated 51% of the sales of Canadian content recordings.

Most of the records and tapes sold in Canada (86%) are manufactured in Canada from master tapes which are leased or bought from an organization outside Canada.

**Recreational equipment.** Ownership of recreational equipment reflects the popularity of certain outdoor activities and sports. Increasing popularity of skiing, particularly cross-country, is mirrored in a 44% increase in Canadian households owning one or more pairs of cross-country skis between 1978 and 1980. By 1980 nearly 23% of households owned at least one pair of cross-country skis and 15% owned one or more pairs of downhill skis.

In the province of Quebec over 38% of households owned one or more pairs of cross-country skis. Downhill skiing was popular in British Columbia and Alberta, two provinces with large cities close to the mountains; nearly one in four BC households and one in five Alberta households owned one or more pairs of downhill skis.

Bicycles also grew in popularity. The number of households owning adult-size bicycles more than doubled between 1971 and 1980, when 44% of households reported owning them.

Households in Canada owning some type of overnight camping equipment increased from 18% in 1971 to 27% in 1980. This equipment has consistently been more common in Alberta with 42% of households owning camping equipment in 1980. Tents are still the most commonly owned overnight camping equipment with 18% of households reporting ownership in 1980.

Boat ownership also increased over the decade. In 1980 almost 16% of households owned some type of boat, up from 12% in 1971. The outboard remained the most common type of boat in most of Canada, but the number of households owning canoes had more than tripled since 1971. They are most common in Manitoba, where 8% of households reported ownership of one or more canoes.

### 15.10 Fitness and amateur sport

The Fitness and Amateur Sport Act was passed in 1961 to encourage, promote and develop fitness and amateur sport in Canada. Since then, Canadians in general have become increasingly aware of the benefits of adopting an active lifestyle and amateur athletes have shown that they can achieve success in world sport competition. Two program areas, Sport Canada and Fitness Canada, help fulfil the dual role.

**Sport Canada** strives to upgrade Canadian participation in amateur sport at national and international levels. It supports activities to help Canadian athletes in their pursuit of excellence. Sport Canada seeks to strengthen national sport governing bodies, while promoting a better understanding of amateur sport.

**National sport organizations.** Some 65 national sport organizations receive over \$25 million annually from Sport Canada. A sizable amount goes toward the operation of a national sport and recreation centre, the home of nearly 60 national sport governing bodies and agencies.

Other multi-sport agencies, such as a sport medicine council of Canada, a Canadian inter-university athletic union, a sports federation of Canada and the Canadian Olympic Association, also receive financial support.

**National team programs.** Activities of about 700 athletes are supported under an athlete assistance plan which enables them to pursue their academic and career vocations while involved in high-performance sport. Assistance includes living and training allowances, tuition payments, working athlete allowances and special needs.

Also subsidized are: travel and accommodation for training camp and talent identification programs; travel expenses to send athletes, coaches and officials to national championships and major international competitions such as the Olympic, Pan American, Commonwealth and world university games; international sport exchange programs; and hosting individual and multi-sport international competitions.

**Human resource development.** Sport Canada aids the development of qualified amateur sport coaches, through support of a coaching association of Canada and funds for national coaching certification and apprenticeship programs.

Development of qualified Canadian officials and professional staff at national and international levels is another priority.

Initiatives to promote sport leadership and participatory opportunities for women include a talent bank feasibility study, a women-in-sport directory, a sport management internship program and a leadership survey. Similar programs aid disabled athletes in competitive and administrative endeavours.

**Hosting major events.** Sport Canada helps offset the costs of hosting world championships and major international sporting events such as Olympic and Commonwealth Games, world cup competitions in a variety of sports and multi-sport games for the disabled.

Funding is provided for national championships of most sports as well as the biennial Canada summer and winter games, the Canadian special Olympics and northern games.

**Promotion and communication.** Besides funding a sport information resource centre, Sport Canada supports an athlete information bureau, promotes Canada's international athletes and sporting activities, sponsors seminars and conferences related to sport development and assists the production of

promotional materials including instructional and motivational sport films.

**Plans for 1988 Winter Olympics.** As part of federal government overall strategy for the 1988 Winter Olympic Games in Calgary, a plan has been prepared to develop Canada's "best ever" Winter Olympic Team. In the preceding five-year period, an estimated \$25 million in special funding will be added to about \$5.5 million being spent each year by Sport Canada on the 10 winter Olympic disciplines.

**Fitness Canada** encourages greater participation in physical activity to develop better fitness levels for Canadians of all ages. It assists more than 60 national organizations such as: the Canadian association for health, physical education and recreation, the Canadian parks/recreation association; Canadian council on children and youth and the Canadian associations for public health, badminton, cycling and diving.

A popular Canada fitness award program for youngsters of 7-17 years has been adapted for the trainable handicapped. Another major area is fitness for older Canadians.

Fitness Canada sponsored the first national physical activity week. It supports ParticipAction campaigns in the news media and projects encouraging a healthy lifestyle through physical activity. A sport demonstration project tours Canada on semitrailers visiting fairs and exhibitions.

**Research.** A Canada fitness survey of 1981 was the first of a series of five-year studies to provide information for updating standards, and the first in-depth look at fitness levels and activity patterns among Canadians. Fitness Canada pioneered employee fitness and its program is in use in many companies.

During 1981-82, Fitness Canada enabled the Canadian public health association to conduct an employee fitness program adapted for blue-collar workers in three Canadian companies. These projects are now prototypes for other industrial employee programs.

### 15.11 Tourism

Tourism affects the lives of almost all Canadians. It has an impact on lifestyles and provides a change of pace from contemporary social pressures. It also can contribute to national unity by increasing understanding among people of different regions of the country.

Tourism is a major earner of foreign exchange for Canada and, given the propensity of Canadians to travel abroad, travel income from visitors is a key plus value in the international balance of payments. The economic effects of tourism are dealt with in Chapter 17, Merchandising and services. While the pleasure of travel cannot be measured in dollars and cents, the activities of travellers have been reported in a 1982 Canadian travel survey conducted by Statistics Canada and sponsored primarily by Tourism Canada. At all times of the year, visiting friends and relatives was the leading activity during trips over 80 km in Canada, reported for nearly half the trips of all persons surveyed. This reached its peak later in the year, no doubt reflecting Christmas season family visits. Other frequently-reported activities were shopping (27% of all person-trips) and sightseeing (16%). Swimming was the most popular sporting activity (11%). Downhill and cross-country skiing were each noted on only 2% of person-trips on an annual basis, but downhill skiing was reported on 9% of trips during January-March 1982 and cross-country skiing, 7%.

**Sources**

- 15.1, 15.2, 15.3, 15.4, 15.5, 15.6 - 15.6.1, 15.8.3, 15.11 Education, Culture and Tourism Division, Statistics Canada.  
15.1.1 Economic Development Division, Department of Communications.  
15.3.1 Public Relations, National Arts Centre.  
15.4.2 Public Relations, Canada Council.  
15.4.3 Various provincial boards and departments.  
15.4.4 Canadian Conference of the Arts.  
15.5.1 - 15.5.2 Information Services, National Museums of Canada.  
15.6.1 Communications Branch, Department of Consumer and Corporate Affairs (Copyright protection).  
15.7 Publications Division, Public Archives of Canada; Public Services Branch, National Library of Canada.  
15.8 Public Affairs, National Film Board of Canada; Telefilm Canada; Merchandising and Services Division, Statistics Canada (movie theatre attendance).  
15.9 Department of Communications (Communications services); Consumer Income and Expenditure Division, Statistics Canada (Recreational equipment).  
15.10 Promotion and Communication, Fitness and Amateur Sport Branch, Department of National Health and Welfare.

**Selected references**

- Culture communiqué*, October 1983. Statistics Canada 87-001, Ottawa, 1983.  
*Motion picture production*, 1981. Statistics Canada 63-206, Ottawa, 1983.  
*Motion picture theatres and film distributors*, 1981. Statistics Canada 63-207, Ottawa, 1983.  
*Printing, publishing and allied industries*, 1981. Statistics Canada 36-203, Ottawa, 1983.  
*Travel, tourism and outdoor recreation: a statistical digest*, 1981. Statistics Canada 87-401, Ottawa, 1983.

# TABLES

.. not available  
 ... not appropriate or not applicable  
 — nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

## 15.1 Federal and provincial government expenditures on culture (thousand dollars)

Function and year <sup>1</sup>	Federal government expenditures					Total
		Operating	Capital	Current grants, contributions and transfers	Capital grants, contributions and transfers	
Performing arts	1980	18,125	—	28,705	4,564	51,394
	1981	22,016	—	33,163	4,330	59,509
	1982	25,826	—	40,981	3,650	70,457
Visual arts	1980	762	—	4,542	—	5,304
	1981	927	—	4,761	—	5,688
	1982	727	—	6,596	—	7,323
Literary arts	1980	216	—	11,695	—	11,911
	1981	290	—	14,344	—	14,634
	1982	164	—	16,099	—	16,263
Crafts	1980	—	—	77	—	77
	1981	—	—	77	—	77
	1982	—	—	166	—	166
Museums	1980	39,852	1,192	8,997	1,142	51,183
	1981	42,874	857	8,680	2,128	54,539
	1982	49,670	1,385	8,705	5,139	64,899
Public archives	1980	21,398	1,065	41	—	22,504
	1981	25,288	1,031	313	—	26,632
	1982	29,335	1,683	601	—	31,619
Libraries	1980	14,332	380	19	—	14,731
	1981	16,813	412	31	—	17,256
	1982	21,036	535	82	—	21,653
Heritage resources	1980	35,907	29,321	1,787	—	67,015
	1981	42,846	27,090	884	—	70,820
	1982	52,435	35,930	3,154	—	91,519
Film	1980	53,402	1,090	2,172	—	56,664
	1981	65,263	1,123	2,616	—	69,002
	1982	69,646	1,993	3,364	150	75,153
Broadcasting	1980	629,239	44,995	36	—	674,230
	1981	699,936	48,726	35	—	748,697
	1982	774,192	60,165	149	—	834,506
Multiculturalism/ethnic organizations	1980	2,064	3	9,856	—	11,923
	1981	3,583	33	12,860	—	16,476
	1982	5,931	75	14,015	—	20,021
Sound recording	1980	—	—	—	—	—
	1981	—	—	20	—	20
	1982	—	—	48	—	48
Other	1980	14,674	—	2,258	—	16,932
	1981	13,255	—	2,083	—	15,338
	1982	16,107	—	3,725	500	20,332
Total	1980	829,971	78,006	70,185	5,706	983,868
	1981	933,091	79,272	79,867	6,458	1,098,688
	1982	1,045,069	101,766	97,685	9,439	1,253,959

### Provincial government expenditures, 1982<sup>1</sup>

	NB	Nfld.	NS	PEI	Que. <sup>3</sup>	Ont.
Performing arts	515	1,257	1,161	901	24,867	20,806
Visual arts	92	21	185	9	1,108	6,086
Literary arts	78	17	70	8	2,402	3,122
Crafts	523	156	264	67	1,235	447
Museums	1,128	742	4,020	43	12,651	50,605
Public archives	696	275	837	90	2,708	1,362
Libraries <sup>4</sup>	11,975	8,521	14,206	2,060	110,211	118,112
Heritage resources	2,893	1,137	318	529	15,365	23,871
Film	4	6	76	—	5,920	905
Broadcasting	65	—	—	—	55,041	33,139
Multiculturalism/ethnic organizations	25	—	234	—	—	2,207
Sound recording	—	—	—	—	—	205
Community programs	134	—	914	—	—	3,516
Other	10	1,908	235	576	21,728	5,181
Total	18,138	14,040	22,520	4,283	253,236	269,564

**15.1 Federal and provincial government expenditures on culture (thousand dollars) (concluded)**

	Provincial government expenditures, 1982 <sup>1</sup>						
	Man.	Sask.	Alta.	BC	YT <sup>2</sup>	NWT <sup>2</sup>	Canada
Performing arts	1,889	921	11,835	4,017	—	—	68,169
Visual arts	257	77	1,937	840	—	—	10,612
Literary arts	100	86	442	164	—	—	6,489
Crafts	—	49	—	19	—	—	2,760
Museums	4,898	2,397	9,903	6,112	—	851	93,350
Public archives	648	719	892	1,368	781	—	10,376
Libraries <sup>4</sup>	11,318	18,075	38,082	52,768	1,025	646	386,999
Heritage resources	981	1,806	4,138	8,605	1,087	—	60,730
Film	783	2,639	193	557	—	—	11,083
Broadcasting	813	—	14,056	752	—	—	103,866
Multiculturalism/ethnic organizations	1,203	352	1,437	236	—	—	5,694
Sound recording	793	837	822	617	—	—	205
Community programs	2,999	1,751	2,772	4,360	147	113	7,633
Other	—	—	—	—	—	—	41,780
<b>Total</b>	<b>26,682</b>	<b>29,709</b>	<b>86,509</b>	<b>80,415</b>	<b>3,040</b>	<b>1,610</b>	<b>809,746</b>

<sup>1</sup>Fiscal year ending Mar. 31, each year.<sup>2</sup>Data were collected from the Public Accounts.<sup>3</sup>Includes expenditures of the Quebec ministry of cultural affairs, Radio Québec, and expenditures on libraries.<sup>4</sup>Estimated figures.**15.2 Support to the arts, by the Canada Council, 1973-74 to 1982-83 (thousand dollars)**

Discipline	1973-74	1974-75	1975-76	1976-77	1977-78
Dance	1,976	2,304	4,119	2,569	3,842
Music and opera	4,764	5,504	6,964	7,733	8,012
Theatre	4,358	4,805	7,235	7,818	9,464
Visual arts and photography	2,059	2,542	3,015	3,633	3,884
Film, video and audio and performance art	882	1,278	1,332	1,531	1,662
Writing, publishing and translation	2,691	3,343	5,208	5,845	6,585
Other disciplines	—	—	1	—	95
Art bank purchases	791	800	756	755	693
Explorations program	1,000	1,026	1,232	1,294	1,386
Touring office grants	465	809	1,200	2,027	2,192
<b>Total</b>	<b>18,986</b>	<b>22,411</b>	<b>31,062</b>	<b>33,205</b>	<b>37,815</b>
	1978-79	1979-80	1980-81	1981-82	1982-83
Dance	4,050	4,602	5,166	6,319	7,752
Music and opera	9,784	9,726	10,386	11,490	12,986
Theatre	8,950	9,535	10,107	11,551	13,444
Visual arts and photography	4,122	4,441	4,627	5,783	6,495
Film, video and audio and performance art	1,721	1,887	1,949	2,493	3,018
Writing, publishing and translation	7,563	7,083	7,027	8,580	9,791
Other disciplines	219	283	401	454	548
Art bank purchases	758	610	644	647	1,021
Explorations program	1,461	1,407	1,425	1,671	1,340
Touring office grants	2,446	2,221	1,961	2,569	3,154
<b>Total</b>	<b>41,074</b>	<b>41,795</b>	<b>43,693</b>	<b>51,557</b>	<b>59,549</b>

### 15.3 Gross art sales by type of artist (percentages), 1977

Art sales by range	Full-time wage earner	Full-time artist	Part-time artist	Total artists
\$ 0	23.1	12.9	22.7	17.3
1 — \$ 4,999	65.9	56.5	77.3	62.5
5,000 — 9,999	5.8	13.5	—	9.2
10,000 — 19,999	3.8	8.1	—	5.6
20,000 — 29,000	—	4.0	—	2.4
30,000 and over	—	5.0	—	3.1
Total				
Average art sales <sup>1</sup> (\$)	3,072	8,798	1,648	6,241
Median art sales <sup>1</sup> (\$)	1,001	2,500	1,002	1,999

<sup>1</sup>Does not include those reporting no income from this source.

### 15.4 Writers by range of writing income, number and per cent, 1978

Income range	Full-time writers		Part-time writers		All writers <sup>1</sup>	
	No.	%	No.	%	No.	%
\$ 0	90	10.6	297	14.6	481	15.3
1 — \$ 4,999	320	37.5	1,365	67.1	1,782	56.7
5,000 — 9,999	142	16.6	257	12.6	435	13.8
10,000 — 19,999	104	12.2	74	3.6	208	6.6
20,000 — 29,999	86	10.1	22	1.1 <sup>2</sup>	108	3.4
30,000 and over	111	13.0	18	0.9 <sup>2</sup>	130	4.1
Total	853	100.0	2,033	99.9	3,144	99.9
Average writing income <sup>3</sup> (\$)	14,095		3,628		6,761	
Median writing income <sup>3</sup> (\$)	7,000		1,380		2,500	

<sup>1</sup>Includes writers who were not active during 1978 and those who did not report their status as full-time or part-time writers.

<sup>2</sup>Based on too few respondents for estimates to be reliable.

<sup>3</sup>Excludes those reporting no writing income in 1978.

### 15.5 Actors and directors by ranges of income (percentages), 1979

Income range from primary performing arts occupation	Actors and directors		Total male and female
	Male	Female	
\$ 0	0.7	2.9	1.6
1 — \$ 4,999	38.4	45.6	41.3
5,000 — 9,999	20.5	25.8	22.7
10,000 — 14,999	12.9	10.1	11.8
15,000 — 19,999	7.4	6.7	7.1
20,000 and over	20.0	8.9	15.5
Total	100.0	100.0	100.0

### 15.6 Summary statistics on the performing arts, 1981

	Theatre	Music	Dance	Opera
Number of organizations	133	48	23	6
Performances	22,953	1,893	1,643	552
Average performance per organization	172	39	71	92
Performances on tour (%)	35	11	57	45

## 15.6 Summary statistics on the performing arts, 1981 (concluded)

	Theatre	Music	Dance	Opera
Revenue by source (%)				
Ticket sales	41	27	24	36
Guarantees	5	11	14	3
Ancillary and other income <sup>1</sup>	7	5	4	3
Grants <sup>2</sup>	47	57	58	58
Expenditures by type (%)				
Personnel	58	74	56	57
Publicity and promotion	10	8	8	8
Administration	8	8	6	5
Other production costs <sup>3</sup>	15	6	23	16
Other expenses <sup>4</sup>	9	5	7	14
Average revenue per organization <sup>5</sup>	496,862	774,765	728,739	1,472,907
Average expenditure per organization	495,125	793,689	741,269	1,385,865
Average surplus (deficit) for season covered	1,737	(18,924)	(12,529)	87,043
Average total expenditure per performance	2,869	20,125	10,383	15,065
Average earned revenue per spectator <sup>6</sup>	5.81	7.77	5.87	9.71

Note: Four performances in the music discipline are slightly underestimated.

<sup>1</sup>Includes revenues from souvenir sales, bar and concession sales, program advertising and sales, income from other sources such as workshops and rental facilities.

<sup>2</sup>Includes all government grants and private contributions.

<sup>3</sup>Includes royalties and fees paid for commissioned works and other production expenses such as sets, props, costumes, wardrobe.

<sup>4</sup>Refers to space costs for office, storage, utilities and maintenance, other expenses such as ticket printing, bar licence.

<sup>5</sup>Includes grants.

<sup>6</sup>Includes earned revenue from bar and concession sales as well as ticket/box-office or guarantee revenue.

15.7 Comparison of performing arts companies, 1980-81<sup>1</sup>

	Theatre	Music	Dance	Opera
1980				
Organizations	115	44	21	6
Performances	21,638	1,624	1,600	403
Revenue by source (%)				
Ticket sales	41	27	24	37
Guarantees	6	10	17	4
Ancillary and other income	6	3	3	0
Grants	47	59	57	58
Expenditures by type (%)				
Personnel	61	73	57	58
Publicity and promotion	8	8	7	9
Administration	6	6	6	8
Other production costs	15	7	22	15
Other expenses	10	5	8	10
Average revenue per organization <sup>2</sup>	491,050	714,840	695,465	1,232,286
Average expenditure per organization <sup>3</sup>	490,151	720,425	678,007	1,228,138
Average surplus (deficit) for season <sup>4</sup>	899	(5,585)	17,458	4,148
1981				
Organizations	115	44	21	6
Performances	20,882	1,600	1,513	552
Revenue by source (%)				
Ticket sales	41	27	23	36
Guarantees	5	11	14	3
Ancillary and other income	7	5	4	3
Grants	46	58	58	58
Expenditures by type (%)				
Personnel	58	74	56	57
Publicity and promotion	10	8	8	8
Administration	8	8	6	5

### 15.7 Comparison of performing arts companies, 1980-81<sup>1</sup> (concluded)

	Theatre	Music	Dance	Opera
Other production costs	15	6	23	16
Other expenses	9	5	7	14
Average revenue per organization <sup>2</sup>	\$59,073	\$31,838	\$78,022	\$1,472,907
Average expenditure per organization <sup>3</sup>	\$57,120	\$82,142	\$789,534	\$1,385,865
Average surplus (deficit) for season <sup>4</sup>	1,952	(20,305)	(9,512)	87,043

<sup>1</sup>Includes only those companies for which information is available for both 1980 and 1981.

<sup>2</sup>Average earned revenue for all performing arts companies was \$279,636 in 1980 and \$325,305 in 1981. Average total revenue was \$590,979 in 1980 and \$678,022 in 1981.

<sup>3</sup>Average expenses for all performing art companies was \$589,640 in 1980 and \$677,884 in 1981.

<sup>4</sup>Average surplus for all companies was \$1,339 in 1980 and a deficit of \$1,862 in 1981.

### 15.8 Large cultural institutions<sup>1</sup>, by region, 1979

Type of museum	Region						
	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Yukon and NWT	Canada
Art museum or gallery	4	7	19	6	3	—	39
Restoration <sup>2</sup>	13	4	16	8	5	1	47
Science	—	1	4	2	2	—	9
Technology <sup>3</sup>	—	7	5	3	3	—	19
Living <sup>4</sup>	1	2	6	1	2	—	13
History	2	—	1	4	1	1	9
General <sup>5</sup>	2	—	—	—	—	—	7
Community <sup>6</sup>	—	1	4	1	1	—	7
Archives	3	5	9	5	3	1	26
Other <sup>7</sup>	—	3	7	4	1	—	15
Total	25	30	71	34	21	3	184

<sup>1</sup>Expenditures over \$100,000.

<sup>2</sup>Includes individual building and historic community restorations.

<sup>3</sup>Includes science and technology museums, planetaria and observatories.

<sup>4</sup>Includes aquaria, botanical gardens, arboretums, conservatories and zoos.

<sup>5</sup>Includes more than one category of collection (archeology, entomology, ethnology).

<sup>6</sup>Includes artifacts of relative recent history from a specific geographic area.

<sup>7</sup>Includes nature park museums or nature centres.

### 15.9 New books published, by language and category, 1980 and 1981

Year and category	Titles published				Total
	English	French	Bilingual	Other	
1980	29	62	—	—	91
Kindergarten - grade 3	89	36	1	1	127
Grades 4-6	66	32	7	—	105
Grades 7-9	82	54	—	2	138
Grades 10-13	81	26	6	—	113
Teachers' aid manuals	119	67	4	2	192
Postsecondary	—	—	—	—	—
Total, textbooks	446	277	18	5	766
Reference	230	97	9	2	338
Professional, technical	116	52	5	1	174
Scholarly	151	49	5	1	206
Children's tradebooks	89	74	6	4	173
Juvenile tradebooks	34	35	1	—	70
Adult tradebooks	1,658	546	4	1	2,209
Total, tradebooks	1,781	655	11	5	2,452
Total, all books	2,744	1,130	48	14	3,936

## 15.9 New books published, by language and category, 1980 and 1981 (concluded)

Year and category	Titles published				Total
	English	French	Bilingual	Other	
1981					
Kindergarten - grade 3	47	74	3	—	124
Grades 4-6	55	50	1	—	106
Grades 7-9	77	65	13	—	155
Grades 10-13	87	48	1	—	136
Teachers' aid manuals	114	57	—	2	173
Postsecondary	110	15	7	—	132
Total, textbooks	490	309	25	2	826
Reference	51	59	7	1	118
Professional, technical	100	20	2	—	122
Scholarly	99	35	12	2	148
Children's tradebooks	173	58	3	2	236
Juvenile tradebooks	21	11	1	—	33
Adult tradebooks	1,724	590	3	2	2,319
Total, tradebooks	1,918	659	7	4	2,588
Total, all books	2,658	1,082	53	9	3,802

## 15.10 UNESCO classification of books published and copies sold

Year and classification	English		French		Bilingual		Other	
	Titles	Copies sold	Titles	Copies sold	Titles	Copies sold	Titles	Copies sold
1980								
General	349	2,551,958	51	409,056	5	38,589	—	—
Philosophy, psychology	44	105,816	41	91,397	—	—	—	—
Religion	52	99,823	52	345,329	—	—	1	83
Sociology, statistics	35	58,269	14	15,845	2	836	—	—
Political science, economics	83	181,623	28	35,549	—	—	—	—
Law, public administration	110	283,567	22	25,885	8	5,325	—	—
Military, defence	6	6,280	2	10,401	—	—	—	—
Education	59	63,354	40	85,100	5	3,024	—	—
Trade	12	87,002	1	472	—	—	—	—
Ethnography	35	75,069	17	10,996	1	292	2	901
First language instruction	78	236,905	71	129,685	4	4,677	—	—
English second language	8	4,805	1	80	4	4,677	—	—
French second language	2	6,914	11	26,606	10	18,178	1	5,420
Other language	24	82,840	2	298	—	—	2	691
Mathematics	48	135,859	44	84,067	—	—	—	—
Natural science	58	150,057	19	17,329	2	2,648	—	—
Medical science	36	168,951	20	26,269	—	—	1	580
Engineering, technology	59	251,017	47	33,068	—	—	—	—
Agriculture	10	24,723	4	8,544	—	—	—	—
Domestic science	23	66,972	43	211,036	—	—	—	—
Business management	108	341,352	51	70,438	1	1,258	—	—
Architecture	7	8,005	2	281	—	—	—	—
Arts, crafts	51	170,348	25	50,141	2	5,319	2	821
Entertainment	483	5,035,838	92	312,539	—	—	—	—
Literary history	41	51,732	24	17,926	—	—	—	—
Literature								
Novels, short stories	567	46,923,818	255	2,845,932	6	8,710	2	999
Poetry	60	23,168	23	27,513	—	—	—	—
Drama	30	4,247	13	5,026	—	—	1	71
Anthology	26	863,648	9	195,523	1	1,523	—	—
Geography, travel	42	110,827	14	43,952	1	219	—	—
History, biography	198	685,157	92	155,326	—	—	2	15,000
Total	2,744	58,859,944	1,130	5,291,609	48	90,598	14	24,566
1981								
General	421	4,023,086	67	235,314	3	2,498	1	200
Philosophy, psychology	15	17,595	54	138,793	1	204	—	—
Religion	42	50,958	54	164,217	—	—	1	124
Sociology, statistics	40	48,166	17	16,058	—	—	—	—
Political science, economics	102	324,821	21	21,643	1	260	—	—
Law, public administration	99	190,646	16	36,551	5	2,442	—	—
Military, defence	5	5,232	—	—	—	—	—	—
Education	45	10,984	15	15,655	3	448	—	—
Trade	12	4,323	1	161	—	—	—	—

### 15.10 UNESCO classification of books published and copies sold (concluded)

Year and classification	English		French		Bilingual		Other	
	Titles	Copies sold	Titles	Copies sold	Titles	Copies sold	Titles	Copies sold
Ethnography	27	21,783	7	2,993	—	—	2	989
First language instruction	133	286,928	98	99,662	—	—	—	—
English second language	10	13,042	—	—	1	54	—	—
French second language	1	514	36	37,422	20	57,824	—	—
Other language	—	—	—	—	—	—	2	1,330
Mathematics	66	127,723	42	77,828	—	—	—	—
Natural science	32	77,360	29	19,896	1	1,003	—	—
Medical science	38	94,283	32	39,069	—	—	—	—
Engineering, technology	23	58,208	13	11,250	—	—	—	—
Agriculture	6	15,658	2	1,452	—	—	—	—
Domestic science	12	23,124	17	48,265	—	—	—	—
Business management	86	188,225	41	32,860	2	353	—	—
Architecture	6	3,173	1	700	—	—	—	—
Arts, crafts	27	157,219	18	21,248	4	2,014	—	—
Entertainment	342	5,258,505	64	143,845	1	2,663	—	—
Literary history	42	79,024	21	15,836	6	209	2	314
Literature								
Novels, short stories	624	62,330,331	274	2,512,490	1	323	—	—
Poetry	71	27,895	23	9,327	—	—	1	71
Drama	42	35,197	18	9,775	—	—	—	—
Anthology	26	891,827	5	197,725	—	—	—	—
Geography, travel	54	230,263	12	24,025	1	1,986	—	—
History, biography	205	965,973	70	108,590	1	319	—	—
Not specified	4	8,376	14	2,847	2	342	—	—
Total	2,658	75,570,442	1,082	4,045,497	53	72,942	9	3,028

### 15.11 National Library growth in titles and loans, 1973-74 to 1982-83

Fiscal year	Legal deposit titles	Relative change (1969-70 = 100)	Interlibrary loan requests <sup>1</sup>	Relative change (1969-70 = 100)
1973-74	14,494	162.1	113,293	142.0
1974-75	14,790	165.4	120,838	151.5
1975-76	14,145	158.2	124,448	156.0
1976-77	15,061	168.4	125,970	157.9
1977-78	16,282 <sup>2</sup>	182.1	130,250	163.3
1978-79	17,852	199.7	133,665	167.6
1979-80	16,000	179.0	178,772	224.1
1980-81	17,905	200.3	173,257	217.2
1981-82	16,356	182.9	139,281	174.6
1982-83	17,420	194.8	157,710	197.7

Items listed in Canadiana

Calendar year	Number	Relative change (1969 = 100)	Calendar year	Number	Relative change (1969 = 100)
1973	25,431	187.1	1978	28,729	211.3
1974	30,439	223.9	1979	31,287	230.2
1975	27,820	204.6	1980	25,775	189.6
1976	25,137	184.9	1981	19,064	140.2
1977	28,512	209.7	1982	26,029	191.4

<sup>1</sup>Totals for certain years obtained by extrapolation.<sup>2</sup>Deposit extended to educational kits, Jan. 1, 1978.

### 15.12 Summary statistics of public libraries, 1979-81

Year, province or territory	Service points <sup>1</sup>	Bookstock <sup>2</sup> '000	Circulation '000	Total operating expenditure \$'000	Full-time professional librarians <sup>3</sup>
1979		747	1,997	2,995	14
Newfoundland	109	191	561	900	9
Prince Edward Island	24				
Nova Scotia	79	1,046	3,528	5,290	62
New Brunswick	50	931	2,558	3,810	33
Quebec	534	6,666	14,141	24,791	154
Ontario	1,106	21,245	56,683	116,085	1,023
Manitoba	79	1,836	4,391	7,077	44
Saskatchewan	308	2,119	5,948	11,507	95
Alberta	262	3,690	10,900	17,557	107

## 15.12 Summary statistics of public libraries, 1979-81 (concluded)

Year, province or territory	Service points <sup>1</sup>	Bookstock <sup>2</sup> '000	Circulation '000	Total operating expenditure \$ '000	Full-time professional librarians <sup>3</sup>
British Columbia	262	4,857	20,571	28,924	265
Yukon	18	141	144	543	4
Northwest Territories	23	96	121	375	3
Canada	2,854	43,565	121,545	219,852	1,813
1980					
Newfoundland	109	757	2,169	3,125	13
Prince Edward Island	26	195	584	962	8
Nova Scotia	79	1,108	3,564	5,838	65
New Brunswick	53	988	2,431	4,091	33
Quebec	678	7,389	16,330	34,766	158
Ontario	1,114	21,878	56,923	126,834	1,026
Manitoba	83	1,784	4,289	8,646	46
Saskatchewan	312	2,203	6,759	13,073	99
Alberta	275	4,236	12,117	21,576	109
British Columbia	264	5,163	21,481	33,895	265
Yukon	7	131	134	673	5
Northwest Territories	23	98	123	375	3
Canada	3,023	45,930	126,903	253,854	1,829
1981					
Newfoundland	113	753	2,085	3,555	15
Prince Edward Island	26	180	605	1,030	8
Nova Scotia	82	1,145	3,863	6,844	67
New Brunswick	53	1,032	2,469	4,104	31
Quebec	722	8,174	17,737	42,906	172
Ontario	1,163	22,520	59,400	143,883	1,050
Manitoba	84	1,868	4,379	10,174	46
Saskatchewan	316	2,262	7,055	15,343	99
Alberta	303	4,343	13,001	26,432	115
British Columbia	267	5,362	20,953	39,375	272
Yukon	7	150	139	723	4
Northwest Territories	23	102	111	394	3
Canada	3,159	47,891	131,797	294,762	1,882

<sup>1</sup>Includes permanent locations and mobile stations.<sup>2</sup>Books and other materials catalogued as books; does not include periodicals and newspaper titles.<sup>3</sup>Total of full-time and part-time positions in full-time equivalents.

## 15.13 National Film Board productions, distribution summary, 1979-80 to 1982-83

	Canada				Abroad			
	1979-80	1980-81	1981-82	1982-83	1979-80	1980-81	1981-82	1982-83
Number of prints sold								
16mm prints	7,660	5,797	6,683	5,582	7,062	5,677	6,293	5,027
Film strips	19,464	15,178	11,436	11,013	4,781	1,946	472	146
Slide sets	9,304	12,212	8,834	6,615	581	315	66	78
8mm prints	454	271	115	1	3,189	91	438	465
Multimedia kits	761	814	593	464	31	89	25	—
Overhead projectuals	24	37	57	34	2	—	—	—
Videocassettes	1,083	1,062	3,351	3,823	105	154	172	348
16mm prints placed in distribution through government agencies and departments	14,328	8,671	4,090	4,342	6,677	6,200	3,116	3,261
Number of prints loaned								
Bookings of 16mm prints through NFB offices	470,747	482,321	510,052	523,131	...	...	—	—
through libraries under contract	107,268	106,173	105,048	107,721	...	...	—	—
through External Affairs and other agencies	...	...	—	—	224,574	183,128	166,847	144,119
Theatre bookings								
35mm and 16mm	2,117	1,869	3,045	1,147	...	...	—	—
Titles sold	...	...	—	—	141	65	241	163
Titles on contract	...	...	—	—	3,711	3,149	3,283	3,124

### 15.13 National Film Board productions, distribution summary, 1979-80 to 1982-83 (concluded)

	Canada				Abroad			
	1979-80	1980-81	1981-82	1982-83	1979-80	1980-81	1981-82	1982-83
Television								
Telecasts (including travel)	9,641	9,538	8,454	8,705	...	—	—	—
Titles sold	...	...	—	—	378	2,016	1,258	4,470
Titles on contract	...	...	—	—	...	7,109	7,995	12,199
Non-commercial telecasts	...	...	—	—	386	307	284	48

### 15.14 Country of origin of new feature films distributed in Canada, 1979-81

Country	1979		1980		1981	
	Number	% of total	Number	% of total	Number	% of total
Canada	24	3.6	44	5.4	36	6.4
France	134	20.2	102	12.4	110	19.6
Germany <sup>1</sup>	29	4.4	18	2.2	23	4.1
Great Britain <sup>2</sup>	11	1.6	13	1.2	13	2.3
Hong Kong <sup>3</sup>	—	—	113	13.8	54	9.6
India <sup>3</sup>	—	—	83	10.1	38	6.8
Italy	28	4.2	91	11.1	70	12.5
United States	330	50.0	295	35.9	196	34.9
Other	106	16.0	62	8.9	21	3.8
Total	662	100.0	821	100.0	561	100.0

<sup>1</sup>Includes both the German Democratic Republic and the Federal Republic of Germany.

<sup>2</sup>Referred to as United Kingdom in 1981. Productions from Northern Ireland were thus reported as 'other' films in 1979 and 1980.

<sup>3</sup>Productions from these countries were reported as 'other' films in 1979.

### 15.15 Average prices, admissions and revenues of motion picture theatres, selected years

Year	Admission receipts		Amusement taxes		Number of paid admissions		Average admission price <sup>1</sup> \$
	Regular theatres \$'000	Drive-ins \$'000	Regular theatres \$'000	Drive-ins \$'000	Regular theatres '000	Drive-ins '000	
1950	82,708	2,291	11,445	300	231,747	4,943	.36
1955	86,374	5,755	10,264	602	184,968	10,688	.47
1960	65,505	6,790	5,365	524	107,705	10,029	.61
1965	75,372	9,790	5,082	505	89,135	10,780	.85
1970	111,692	17,047	8,111	1,118	80,826	11,489	1.38
1975	182,139	29,283	13,406	1,973	84,161	12,843	2.16
1976	192,462	31,573	14,094	2,105	82,328	13,048	2.34
1977	197,813	31,880	12,529	1,544	76,455	11,779	2.59
1978	218,358	33,557	9,777	1,182	81,597	11,634	2.68
1979	239,349	38,175	9,303	1,127	86,010	12,151	2.78
1980	271,128	40,291	8,653	1,292	88,980	11,991	3.05
1981	279,219	40,876	14,416	1,886	84,855	11,200	3.29

<sup>1</sup>Admission receipts excluding taxes divided by number of paid admissions. (Regular theatres only.)

### 15.16 Canadian households with communications services, 1982

	Number of households '000	% of total households	1981	
			Number '000	% change
Television	8,101 <sup>1</sup>	98.1	7,887	2.7
Colour	7,013	85.0	6,685	4.9
Black and white	3,546	43.0	3,655	-3.0
Radio (AM and FM)	8,152 <sup>1</sup>	98.8	7,934	2.7

15.16 Canadian households with communications services, 1982 (concluded)

	Number of households '000	% of total households	1981	
			Number '000	% change
Telephone	8,084	97.9	7,870	2.7
Cable television	4,923	59.6	4,553	8.1
Total Canadian households	8,254	..	8,063	2.4

<sup>1</sup>Includes households with one or more (TV, radio or phone, according to category).  
Source: Statistics Canada Catalogue 64-202 Annual, May 1982.  
Note: Colour and black and white televisions do not total to equal number of televisions because some households have one or more of both.

15.17 Freelance payments, CBC radio and television, 1980-82<sup>1</sup> (thousand dollars)

Year and item	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Northern service	Radio-Canada International	Total cost
1980								
Musicians' fees	995	3,352	4,304	1,251	1,174	38	78	11,192
Union actors, writers and performers	1,785	12,717	11,694	2,352	2,560	4	115	31,227
Other actors, writers and performers	1,681	1,444	9,593	1,387	453	177	214	14,949
Talent payroll	4,461	17,513	25,591	4,990	4,187	219	407	57,368
Royalty payments to authors', composers' and musicians' associations	221	675	432	315	149	—	—	1,792
Other production fees and performing rights (special events and news)	234	7,423	9,064	440	1,755	26	137	19,079
Total	4,916	25,611	35,087	5,745	6,091	245	544	78,239
1981								
Musicians' fees	923	3,610	4,826	1,452	1,292	23	76	12,202
Union actors, writers and performers	1,966	13,672	12,987	2,192	2,481	20	117	33,435
Other actors, writers and performers	1,926	1,703	11,261	1,509	1,732	149	216	18,496
Talent payroll	4,815	18,985	29,074	5,153	5,505	192	409	64,133
Royalty payments to authors', composers' and musicians' associations	250	712	463	355	174	—	—	1,954
Other production fees and performing rights (special events and news)	8	7,338	12,376	960	—	26	168	20,876
Total	5,073	27,035	41,913	6,468	5,679	218	577	86,963
1982								
Musicians' fees	1,008	3,676	4,663	1,222	1,616	14	44	12,243
Union actors, writers and performers	2,339	13,724	15,074	2,508	2,625	24	130	36,424
Other actors, writers and performers	1,508	1,656	14,002	2,448	1,884	155	210	21,863
Talent payroll	4,855	19,056	33,739	6,178	6,125	193	384	70,530
Royalty payments to authors', composers' and musicians' associations	286	768	503	410	190	—	—	2,157
Other production fees and performing rights (special events and news)	1,146	10,192	10,657	1,335	981	66	228	24,605
Total	6,287	30,016	44,899	7,923	7,296	259	612	97,292

<sup>1</sup>Fiscal years ending March 31.

15.18 New releases, by Canadian-content<sup>1</sup> and musical category, 1979-81<sup>2</sup>

Musical category and year	Canadian-content recordings		Non-Canadian-content recordings	
	7" singles	12" albums	7" singles	12" albums
1979				
Adult-oriented popular music	69	63	193	413
Top 40 or rock oriented music	206	125	915	1,140

### 15.18 New releases, by Canadian-content<sup>1</sup> and musical category, 1979-81<sup>2</sup> (concluded)

Musical category and year	Canadian-content recordings		Non-Canadian-content recordings	
	7" singles	12" albums	7" singles	12" albums
Classical	—	22	—	217
Jazz	3	4	13	163
Country and folk	99	81	174	169
Children's	1	6	2	32
Other	5	10	19	36
Unspecified	10	15	—	—
<b>Total</b>	<b>393</b>	<b>326</b>	<b>1,316</b>	<b>2,170</b>
<b>1980</b>				
Adult-oriented popular music	75	70	150	318
Top 40 or rock oriented music	251	184	894	1,093
Classical	2	8	2	384
Jazz	1	6	1	183
Country and folk	78	59	149	193
Children's	1	10	3	44
Other	15	14	8	35
Unspecified	—	—	—	—
<b>Total</b>	<b>423</b>	<b>351</b>	<b>1,207</b>	<b>2,250</b>
<b>1981</b>				
Adult-oriented popular music	131	85	239	286
Top 40 or rock oriented music	263	168	943	1,189
Classical	1	22	4	533
Jazz	1	4	1	90
Country and folk	93	67	162	177
Children's	3	14	14	44
Other	7	24	18	164
Unspecified	—	—	—	—
<b>Total</b>	<b>499</b>	<b>384</b>	<b>1,381</b>	<b>2,483</b>

<sup>1</sup>"Canadian-content" refers to criteria specified by the CRTC. A record must have some combination of any two of the following characteristics: the record was produced in Canada; the lyrics were written by a Canadian; the music was composed by a Canadian; the featured performer is a Canadian.

<sup>2</sup>The number of firms declaring releases was in 1979 = 57; 1980 = 45 and 1981 = 68.

### 15.19 Participation in recreational activities, 1981<sup>1</sup>

Activity	Persons 10 years and over <sup>2</sup>		Activity	Persons 10 years and over <sup>2</sup>	
	No.	%		No.	%
Walking	11,861	57	Popular dance	2,610	13
Bicycling	7,838	38	Baseball	2,285	11
Swimming (pool)	7,498	36	Alpine skiing	2,244	11
Jogging, running	6,456	31	Ice hockey	1,958	9
Gardening	6,183	30	Bowling	1,717	8
Home exercises	5,832	28	Exercise classes	1,641	8
Ice skating	4,330	21	Racquetball	1,227	6
Cross-country skiing	3,631	18	Curling	999	5
Tennis	3,050	15			
Golf	2,623	13	<b>Total participants</b>	<b>20,718</b>	<b>100</b>

<sup>1</sup>*Fitness and Lifestyle in Canada*, Canada Fitness Survey.

<sup>2</sup>Participating at least once in 12 months preceding the survey.

### 15.20 Selected activities of Canadian travellers, 1982

Activity	Person-trips <sup>1</sup> '000	Activity	Person-trips <sup>1</sup> '000
Visit friends or relatives	49,444	Other water sports	5,609
Convention	1,894	Hunting or fishing	6,350
Shopping	27,348	Cross-country skiing	2,014
Sightseeing	15,873	Downhill skiing	2,436

15.20 Selected activities of Canadian travellers, 1982 (concluded)

Activity	Person-trips <sup>1</sup> '000	Activity	Person-trips <sup>1</sup> '000
Attend cultural events	4,026	Other sports or outdoor activities	5,817
Nightlife, recreational activities	12,391	No activities reported	23,000
Visit zoo, historic site, natural display	5,924	Total with one or more activities	78,642
Visit national park	3,065		
Attend sports events	5,568	Total	101,642
Swimming	11,479		

<sup>1</sup>Travel by residents of Canada on trips of 80 km or more with destinations in Canada.  
Source: *Canadian Travel Survey*, 1978, Statistics Canada 87-002.

Sources

- 15.1, 15.3 – 15.10, 15.12, 15.14, 15.18, 15.20 Education, Culture and Tourism Division, Statistics Canada.
- 15.2 Public Relations, Canada Council.
- 15.11 Library Documentation Centre, National Library of Canada.
- 15.13 Public Affairs, National Film Board of Canada.
- 15.15 Education, Culture and Tourism Division and Merchandising and Services Division, Statistics Canada.
- 15.16 Economic Statistics Division, Department of Communications.
- 15.17 Info-Centre, Canadian Broadcasting Corp.
- 15.19 Fitness and Amateur Sport Branch, Department of National Health and Welfare.



CHAPTER 16

---

# MANUFACTURING



## UPDATE

---

Petroleum refining continued to be Canada's leading manufacturing industry in 1983, measured by the value of shipments at an estimated total of \$22.3 billion.

Motor vehicle manufacturers ranked second with shipments valued at \$16.8 billion. Pulp and paper mills were third at \$11.1 billion.

Ontario is the leading manufacturing province as well as being the most populous, and in 1982 recorded 50.0% of manufacturing shipments. Quebec was second, with 26.2% of shipments.

Nearly 2 million people in Canada are employed in manufacturing, about half of them in plants with less than 200 workers. The average size plant has about 48 employees. In 1982 there were also 138 larger manufacturing establishments which each had payrolls of 1,000 or more.

Making optimum use of capital stock resources in manufacturing depends on markets and anticipated orders. Following a slump in 1982, capacity utilization expanded gradually through 1983 but dropped again early in 1984.

## CHAPTER 16

---

# MANUFACTURING

<b>16.1</b>	<b>Manufacturing in 1982</b>	<b>503</b>
16.1.1	Provincial analysis	503
16.1.2	Major industry groups	503
<b>16.2</b>	<b>Manufacturing in 1981</b>	<b>504</b>
16.2.1	Leading industries	504
16.2.2	Shipments of the top 10 groups	504
16.2.3	Provincial highlights	505
<b>16.3</b>	<b>Capacity utilization</b>	<b>505</b>
<b>16.4</b>	<b>Federal assistance to manufacturing</b>	<b>506</b>
16.4.1	Industrial and regional development	506
16.4.2	Small businesses loans	507
16.4.3	Machinery program	507
16.4.4	Industrial design	507
16.4.5	Defence industry productivity	507
16.4.6	Canadian Industrial Renewal Board	507
<b>16.5</b>	<b>Canada Development Corp.</b>	<b>507</b>
<b>16.6</b>	<b>Federal protection and standards</b>	<b>508</b>
16.6.1	Patents and trade marks	508
16.6.2	Industrial design and timber marks	508
16.6.3	Standards Council of Canada	509
16.6.4	Trade standards and regulations	509
<b>16.7</b>	<b>Provincial assistance to manufacturing</b>	<b>509</b>

## TABLES

16.1, 16.2	Value of shipments	515
16.3	Net profit of corporations	515
16.4	Summary statistics of manufactures	516
16.5-16.9	Manufacturing establishments	516
16.10	Domestic exports of manufactures	521
16.11	Destination of shipments	521
16.12	Employees, by industry group	522
16.13	Manufactures, by province	524
16.14	Industries, by metropolitan area	526
16.15	The four leading enterprises	527
16.16	Capacity utilization rates	528

## CHART

Chart 16.1	Capacity utilization, manufacturing industries	506
------------	--	-----

## CHAPTER 16

# MANUFACTURING

### 16.1 Manufacturing in 1982

In 1982 the manufacturing sector of the Canadian economy posted one of the weakest performances in many years. The total value of all shipments of goods of own manufacture reported by manufacturing establishments for 1982 came to \$187.9 billion, down 1.6% from \$191.0 billion in 1981. This was the first such year-over-year decline since 1958 and was the worst performance in this respect since 1946. These figures are based on current dollars; to determine the decline in real volume terms it is necessary to eliminate the impact of inflation. This may be done by adjusting for the increase in the industrial selling price index (ISPI) which covers approximately the same set of industries. The ISPI showed a gain of 6.0% in 1982; after adjusting for this inflation factor, the decline in shipments in 1982 from 1981 came to 7.2% measured in real terms.

The proportion of the Canadian gross domestic product (GDP) which is accounted for by the manufacturing sector dropped quite sharply to 18.4% in 1982 from 20.6% in 1981 and 20.6% also in 1980. The greatest weakness was in industry groups that depend upon low interest rates to support capital investment. Such industry groups as wood, primary metals and machinery were particularly affected as demand in these areas dropped sharply with the rise in interest rates.

#### 16.1.1 Provincial analysis

Eight provinces, representing 99.2% of all Canadian shipments, reported declines in 1982. Analyzing the national decrease of 1.6% on a provincial basis, the largest percentage decrease occurred in New Brunswick, which dropped 13.5% on 1.8% of the national total shipments, and in British Columbia which declined 6.6% on 8.3% of the total. The two largest industrial provinces also recorded decreases: Quebec reported a 1.9% dip on 26.2% of the total shipments while Ontario recorded a marginal decrease easing 0.1% on 50.0% of the national aggregate. Other provincial totals which declined as much as or more than the national decrease were Manitoba with a 2.8% decrease on 2.6% of the total shipments and Nova Scotia which declined 5.5% on 1.9% of the national aggregate. Saskatchewan was down 0.6% on 1.3% of the total.

Newfoundland, Prince Edward Island, Yukon and Northwest Territories recorded percentage increases but on such small volumes of total shipments as to be ineffective in reducing the overall national decrease.

Yukon and Northwest Territories had a 15.8% increase on 0.02% of the national aggregate, Newfoundland gained 3.8% on 0.7% of the Canadian volume and Prince Edward Island showed a rise of 3.3% on 0.1% of the national shipment total.

#### 16.1.2 Major industry groups

Analyzing the decrease by major industry group at the national level, the weakest performance was reported by the wood industries group which declined by 15.0% to \$7.2 billion from \$8.4 billion in 1981. The primary metals industries group declined by 14.2% to \$12.4 billion. Other groups with declines in excess of 10.0% were machinery industries, down 11.8% to \$7.7 billion, textile industries, down 10.8% to \$4.5 billion, and furniture and fixture industries, down 10.1% to \$2.5 billion.

Countering the general downward trend, six major groups showed increases. The strongest were the tobacco products industries group, up 8.7% to \$1.5 billion, the chemical and chemical products group, up 6.9% to \$14.1 billion, and the petroleum and coal products group which gained 6.1% to \$21.7 billion.

When adjustments are made for the inflation factor as measured by the ISPI, the actual quantity of goods shipped showed a decrease in all 20 major industry groups. After making this adjustment for price increases the chemical and chemical products group had a decrease of only 0.3% in quantity of goods shipped followed by the food and beverage group, down 1.6%. The weakest performances in terms of actual quantities shipped were recorded by the machinery group, down 19.2%, the non-metallic mineral products group, down 18.5%, and the furniture and fixtures group, lower by 17.6%.

The two groups with the largest percentage drop in the value of shipments before adjusting for inflation, the wood group and the primary metals group, were the only groups actually to record a drop in their ISPI. This deflation was calculated at -2.7% for the wood industries group and -0.6% for the primary metals group.

Tracing these larger shipment decreases back to the provincial level, the decline in wood industries was due largely to the 15.3% drop in British Columbia where almost half the nation's shipments originate, while New Brunswick and Saskatchewan had drops of 26.8% and 23.2% on smaller volumes.

Similarly the decrease in the primary metals group may be traced largely to Ontario which declined by 17.1% and accounted for 57.0% of all shipments in Canada. Other provinces with large percentage declines included Alberta, down 22.2% on 5.0% of the national volume and Manitoba which declined 22.1% on 1.4% of the Canadian total shipments. Moderating the national decline was Quebec which eased back by only 6.1% on 27.4% of the national shipment total. Thus while all industrial groups suffered, the wood industries in British Columbia and the primary metals industries in Ontario and Alberta were the weakest areas in the manufacturing sector in 1982.

## 16.2 Manufacturing in 1981

Total value for manufacturing in 1981 came to \$191.0 billion, up 13.7% from \$168.1 billion in 1980 and 25.6% higher than the \$152.1 billion in 1979.

The two largest industrial provinces were Ontario with 49.2% or \$94.0 billion worth of national total shipments and Quebec with 26.2% valued at \$50.1 billion. Some others in descending order were British Columbia (8.8%), Alberta (7.0%), Manitoba (2.6%) and New Brunswick (2.0%).

All the provinces showed increases in value of shipments (Table 16.1) with the highest increase in Alberta (27.7%), followed by Saskatchewan (18.2%), Yukon and Northwest Territories (15.2%), Ontario (14.4%), Manitoba (14.2%), Newfoundland (13.2%), Quebec (12.4%), Nova Scotia (10.7%), New Brunswick (8.0%), British Columbia (5.7%) and Prince Edward Island (5.4%).

The strongest growth was in the petroleum and coal products industries which rose by 40.8% to \$20.5 billion. The next best gains were made by the furniture and fixtures industries, up 19.4% to \$2.8 billion and by chemical and chemical products industries, up 17.6% to \$13.2 billion. Other groups which surpassed the national all-industry increase of 13.7% were electric products industries, up 15.1% to \$8.9 billion; printing, publishing and allied industries, up 14.9% to \$6.5 billion; textile industries, up 14.4% to \$5.1 billion and the transportation equipment industries, up 14.2% to \$21.7 billion.

**Effect of inflation.** To determine the proportion of the national all-industry increase of 13.7% which reflects real growth it is necessary to eliminate the impact of inflation. The ISPI, which covers approximately the same set of industries, recorded a growth of 10.2% in 1981 over 1980. Thus the real growth in shipments stood at 3.5%.

### 16.2.1 Leading industries

The leading manufacturing industry in Canada in 1981 in terms of shipments was petroleum refining at \$20.0 billion. The pulp and paper mills category was next highest with shipments of \$11.6 billion. There has been a continuing strong export demand for newsprint, an important component in this industry.

Motor vehicles, the leading category in the late 1970s, slipped from first place to second in 1979 and third in 1981.

Two industries were in the \$6 billion to \$8 billion range. Slaughtering and meat packing shipped \$7.6 billion. Iron and steel mills at \$7.0 billion in shipments, up from \$6.4 billion in 1980, reflected an increase in production. Miscellaneous machinery and equipment shipped \$5.8 billion in 1981. A world leader in pulp and paper machinery, this industry also excels at producing custom-made equipment. Sawmills and planing mills had shipments of \$5.0 billion, down from \$5.1 billion in 1980, continuing a decline caused by decreased exports and demand for housing.

The eighth to tenth largest industries had shipments under \$5 billion. Dairy products at \$4.9 billion rose from \$4.5 billion in 1980. Output in the motor vehicle parts and accessories industry was \$4.4 billion. Although more than half the shipments were exported, there remains a substantial trade deficit with the US in this industry. The tenth largest industry with shipments of \$3.4 billion was metal stamping and pressing. This industry manufactures a wide variety of products from licence plates to tin cans.

### 16.2.2 Shipments of the top 10 groups

Of the total \$191.0 billion in manufacturing shipments from the major industry groups for 1981, the food and beverage industries were leading at \$31.8 billion. Transportation equipment followed at \$21.7 billion; petroleum and coal products, \$20.5 billion, paper and allied industries, \$15.7 billion; the primary metals industries, \$14.4 billion; chemical and chemical products industries, \$13.2 billion; metal fabricating industries, \$12.4 billion; electrical products, \$8.9 billion; machinery industries, \$8.7 billion; and wood industries, \$8.4 billion (Table 16.2).

All of these groups showed an increase in shipments over 1980. The food and beverage industries were up 12.6% from \$28.2 billion; transportation equipment, up 14.2% from \$19 billion; petroleum and coal products, up 40.8% from \$14.5 billion; paper and allied industries, up 8.5% from \$14.5 billion; primary metals industries, up 6.7% from \$13.5 billion; chemical and chemical products, up 17.6% from \$11.2 billion; metal fabricating industries, up 5.6% from \$11.7 billion; electrical products, up 15.1% from \$7.8 billion; machinery industries, up 13.6% from \$7.6 billion and wood industries, up 0.5% from \$8.4 billion.

### 16.2.3 Provincial highlights

Manufacturing is a major user and producer of goods and an important source of employment in Canada. According to a monthly sample survey of households, 2.1 million persons were paid salaries or wages by the manufacturing industry in 1981 out of a total of 10.9 million in all sectors of the economy. The following summary gives provincial highlights for 1981. Tables 16.1, 16.12 and 16.13 include data for 1982.

**Newfoundland.** The highest value of manufacturing shipments in 1981 was in the food and beverage industries group at \$551.7 million, with fish products leading at \$399.9 million. This was followed by shipments from pulp and paper mills at \$351.3 million. The food and beverage group recorded the largest number of employees, more than 11,000, with nearly 8,500 of them in the fish products industry.

**Prince Edward Island.** The highest value of shipments in 1981 was in the food and beverage industries group at \$186.7 million. Under this heading, the highest value was in dairy products, \$58.2 million, followed by fish products, \$49.8 million. The next highest value was in mixed fertilizers in the chemical and chemical products group, at \$15.1 million. More than 2,000 employees were in the food and beverage industries.

**Nova Scotia.** As in the other Atlantic provinces, the food and beverage industries in 1981 had the highest value of manufacturing shipments, \$951.5 million and nearly 11,800 employees. Under this category, the highest value was in fish products, \$431.8 million. The paper and allied industries group was second with a value of \$428.0 million.

**New Brunswick.** The food and beverage industries had the highest value of manufacturing shipments, \$863.5 million in 1981 with fish products leading at \$173.1 million. The second highest value was in the wood industries group at \$250.9 million. Nearly 10,000 employees worked in the food and beverage manufacturing industries, and nearly 4,000 in wood industries.

**Quebec.** By far the highest value in manufacturing shipments was in the food and beverage industries, \$8.3 billion in 1981. Meat and poultry products had a shipment value of \$2.1 billion and dairy products, \$1.9 billion. This was followed by a value of \$5.4 billion in the petroleum and coal products industries, the largest amount coming from refineries. Food and beverage industries employed nearly 59,000 and the clothing industries employed nearly 57,000 of the half million people in the province who worked in manufacturing.

**Ontario.** The highest value in manufacturing shipments was in the transportation equipment industries, \$15.8 billion. In this group, motor vehicle manufacturers had a shipment value of \$9.3 billion while motor vehicle parts and accessories had a value

of \$4.2 billion. The second highest group was the food and beverage industries at \$12.5 billion. The transportation equipment industries employed nearly 112,000 workers and the metal fabricating industries more than 89,000.

**Manitoba.** The food and beverage industries group had manufacturing shipments valued at \$1.4 billion in 1981 with \$581.4 million from meat and poultry products and \$508.7 million from slaughtering and meat processors. The machinery industries followed at \$486.9 million. The food and beverage industries had the largest number of employees, 10,509, followed by the clothing industries with 7,058.

**Saskatchewan.** The highest value in shipments in 1981 was \$871.7 million in the food and beverage industries group. Of this, \$319.5 million came from slaughtering and meat processor industries. Second highest was \$188.4 million in the machinery industries. More than 5,000 employees were in the food and beverage industries and nearly 2,500 in the machinery industries.

**Alberta.** In this province the value of shipments in the food and beverage industries group was \$3.6 billion, with meat and poultry processors accounting for \$1.9 billion of this total. The second highest value was in the petroleum and coal products industries. Nearly 17,000 people were employed in the food and beverage industries, and more than 10,000 in metal fabricating.

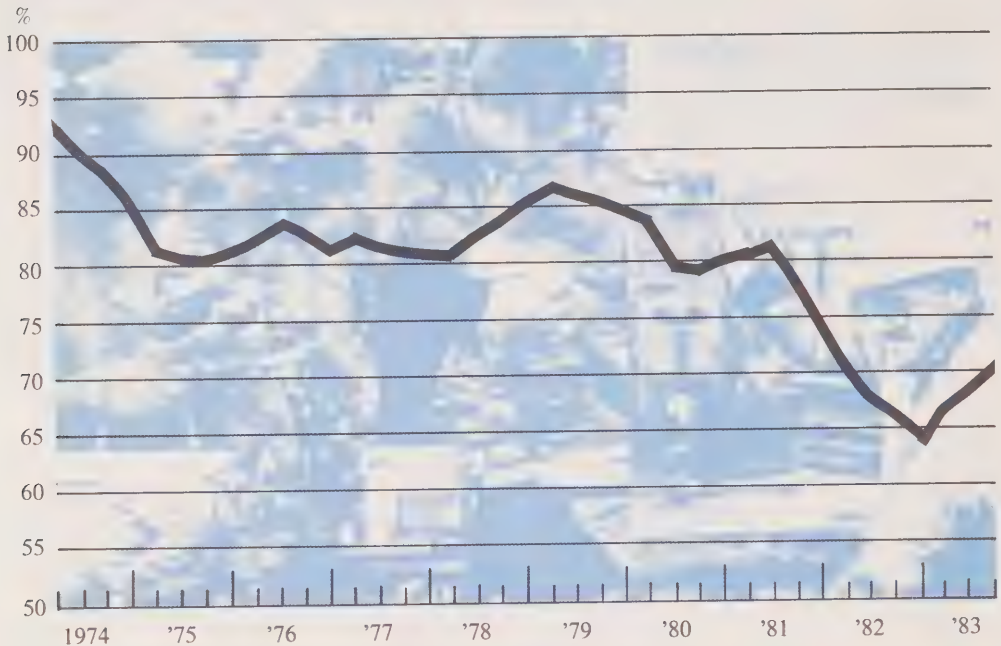
**British Columbia.** The wood industries group showed the highest value of shipments in 1981, \$4.1 billion, with sawmills, planing and shingle mills adding up to \$3.1 billion. Next came the paper and allied industries at a value of \$2.9 billion. The wood industries also had the largest number of employees, 46,627, followed by the paper and allied industries with 20,660.

## 16.3 Capacity utilization

Capacity utilization rates measure the extent to which capital stock resources are used in the production of goods. The gap between the potential and actual use made of capital assets is a reflection of economic activity. The capacity utilization rates for all manufacturing rose from 80.3% in the first quarter of 1981 to 81.5% in the second, then fell in each succeeding quarter to a low of 63.5% in the last quarter of 1982.

Capacity utilization for all manufacturing industries in the first quarter of 1983 was 67.0%, a decrease of 3.2% from the same period the previous year and a sharp contrast to 92.8% in the first quarter of 1974 which was the highest rate in the last two decades. By the fourth quarter of 1983, however, total capacity utilization had increased to 72.5% and non-durables measured 78.7%, somewhat greater than 66.4% for durables. Non-durable industries have usually had

Chart 16.1

**Capacity utilization rates, manufacturing industries**

greater capacity utilization rates historically, partly because of the perishable nature of the goods produced which discourages inventory buildup and a constant demand for such products as food and clothing. Demand for durable goods shows a more cyclical behaviour with plants often having excess capacity to meet peak demands. Table 16.16 traces the changes in capacity utilization from the first quarter of 1961 to the second quarter of 1984.

As Canadian exports have become more attractive abroad with the devaluation of the dollar, and domestic manufacturers have been substituting cheaper Canadian products for imports, the economy has experienced a surge in demand for certain manufactured goods. For example, four major groups out of 20 were operating at near capacity in the first quarter of 1980: printing and publishing at 98.9%, machinery industries at 97.3%, paper and allied products at 96.9% and knitting mills at 90.6%. Major groups operating in the 85% to 89.9% range were tobacco at 89.9%, food and beverages at 89.4%, miscellaneous manufacturing industries at 88.9%, textiles at 88.1%, metal fabricating at 87.8%, rubber and plastics at 87.4% and electrical products at 87.2%.

### 16.4 Federal assistance to manufacturing

The regional industrial expansion department (DRIE) is responsible for encouraging investment in viable industrial undertakings in manufacturing and resource processing as well as related service industries, tourism and small business.

The merger of elements of the departments of industry, trade and commerce (ITC) and of regional economic expansion (DREE) announced in January 1982 combines in DRIE the industry sector of ITC and DREE's experience of regional delivery of federal economic assistance programs. The department has regional offices and sub-offices in every province and territory.

#### 16.4.1 Industrial and regional development

The industrial and regional development program (IRDP) combines the elements of seven former programs of the departments of industry, trade and commerce and regional economic expansion.

IRDP is delivered and administered regionally with particular attention to the needs of small and medium-sized businesses. The program provides four levels of assistance. Each Canada census division is assessed independently to ensure that the highest

levels of assistance may be available to the neediest areas.

Financial support includes grants, contributions, repayable contributions, participation loans and loan guarantees. Thus IRDP can provide help for infrastructure and institutional projects to benefit industrial development. Assistance stimulates the development of new products or processes to increase industrial productivity and international competitiveness. Funds help to establish new production projects in regions with relatively high economic disparity and to modernize or expand existing facilities. IRDP also provides money to manufacturing or processing firms for market research and strategy studies.

#### **16.4.2 Small businesses loans**

A Small Businesses Loans Act (SBLA) makes loan guarantees available to new and existing small businesses. A small business is defined as an enterprise whose annual gross revenues do not exceed \$1.5 million during a fiscal period. For a new business, it is an enterprise whose estimated gross revenue in the first fiscal period, not less than 52 weeks, does not exceed \$1.5 million.

Loans are made by chartered banks and other approved lending institutions to small business enterprises in manufacturing, wholesale or retail trade, service businesses, construction, transportation and communications. Under the act a small business may have outstanding not more than \$100,000 at any one time.

The rate of interest on SBLA loans is set at 1% over the prime lending rates of the chartered banks and fluctuates with changes in those rates for the duration of the loan. Loan repayment is not to exceed 10 years. Instalments must be paid at least annually or more frequently at the discretion of the lender.

All SBLA loans must be secured. Security can be in the form of land or chattel mortgages or other security that the lender deems to be required. A borrower is also required to sign a promissory note undertaking to repay the loan. Other terms and conditions are worked out between the lender and the borrower.

#### **16.4.3 Machinery program**

This program is an industrial development incentive with a twofold objective. It encourages machinery manufacturers to derive optimum benefit from the tariff on machinery and enables machinery users to acquire advanced production equipment at the lowest possible cost.

The program assists Canadian machinery manufacturers by ensuring tariff protection on the machinery and equipment they produce as soon as they are able to supply. Direct contacts between machinery producers and users encourage the purchase of Canadian-made machinery instead of imported equipment. Machinery users benefit from

remissions of duty under the program in terms of reduced cost for the purchase of advanced production equipment not obtainable in Canada.

#### **16.4.4 Industrial design**

The National Design Council, created by an act of Parliament in 1961, is responsible for improving the quality of design in Canadian industrial products. The 17 council members represent industry, the professions, labour, distributors and the consumer. They function in an advisory capacity to the minister of DRIE.

The awards and design directorate of the office of industrial adjustment of DRIE acts as secretariat to the National Design Council. The directorate promotes improved industrial design, particularly helping small and medium-sized companies to strengthen their design capability and to develop and market new or improved products. It administers a cost-sharing grant arrangement with the provinces through a product development management program, administers federal productivity awards and design awards programs, provides design advisory services to industry and administers a scholarship program to upgrade design skills in Canada.

#### **16.4.5 Defence industry productivity**

The defence industry productivity program (DIPP) offers financial assistance to companies that develop or produce defence or defence-related products for export. Funds are available for market studies, research and development of products for export, acquisition of modern tools and equipment to meet military standards, and pre-production expenses in establishing manufacturing sources in Canada for defence or defence-related export markets.

The program helps companies across a wide range of industry sectors including electronics, transport, avionics, navigation equipment, space technology, metallurgy and engines.

#### **16.4.6 Canadian Industrial Renewal Board**

This board was set up in October 1981 to modernize and renew the textile, clothing and footwear industries; to broaden the economic base of certain communities; and to assist workers who are affected by technological change. Most of its activity is carried out in the general areas of Montréal, Toronto, Winnipeg and to some extent Vancouver.

### **16.5 Canada Development Corp.**

Canada Development Corp. (CDC) is an enterprise through which Canadian investors can employ their savings in the development of profitable enterprises.

Although the initial share subscription for CDC came from the federal government, the corporation was specifically designed to operate in the private sector from which it has raised all its funds since 1974. Thousands of individual investors

and institutions own more than 51% of CDC. The federal government recently announced its intention to realize on its holding in CDC over time in an orderly way when financial markets are more favourable and an appropriate return on its investment is possible.

The corporation's three main objectives are: to develop and maintain strong, Canadian-controlled and managed corporations in the private sector, to widen the investment opportunities open to Canadians, and to operate profitably and in the best interests of all shareholders.

To reach these objectives, CDC generally acquires effective control positions and builds up managerial, entrepreneurial, technical and research talents in these companies so that they can attain maximum profitability and growth.

In keeping with the corporation's objectives, ownership of CDC voting shares is restricted by law to citizens or residents of Canada and to Canadian-controlled corporations. At present, no individual or corporate entity may hold more than 3% of the outstanding CDC shares.

CDC's holdings include the fourth largest Canadian-controlled oil and gas and sulphur company, a large producer of zinc, copper, silver, lead, tin and cadmium, as well as potash, and a manufacturer of a wide range of petrochemical products.

CDC further owns 78% of a leading company in word-processing equipment, as well as having active companies in the East Coast fishing industry, industrial automation, life sciences and venture and expansion capital.

## 16.6 Federal protection and standards

### 16.6.1 Patents and trade marks

The intellectual property directorate, a part of the corporate affairs bureau of the consumer and corporate affairs department, administers legislation covering patents, trade marks, copyright and industrial design.

**Patents.** Patents for inventions are issued under the provisions of the Patent Act (RSC 1970, c.P-4; 1970-72 c.1) and the patent rules. Applications for patents for inventions and requests for information about such patents should be addressed to: Commissioner of Patents, Ottawa-Hull K1A 0E1.

By March 31, 1984, the patent office had issued nearly 1.2 million patents which are classified by subject matter so that they can be searched easily.

Patents remain in force for 17 years from the date of issue. Paper copies of Canadian patents issued before 1948 may be purchased from the Commissioner of Patents. Patents issued after January 1, 1948 are available from Micromedia Ltd., Hull, Que. J8X 3X2. Microfiche copies of all Canadian patents are available from Micromedia Ltd. The official journal of the patent office, the *Patent office record*,

is published weekly and contains information about all patents issued during that week. It is available from the Canadian Government Publishing Centre, Supply and Services Canada, Ottawa K1A 0S9.

The patent office has a public search room holding many journals, textbooks and reports, as well as the patents of other countries including the United States, Great Britain, France, Japan and the Federal Republic of Germany.

**Trade marks.** Trade marks are registered under the provisions of the Trade Marks Act and the trade mark rules. Applications for registration of a trade mark should be sent to the Registrar of Trade Marks, Ottawa-Hull K1A 0E1.

Applications are examined for compliance with the requirements of the Trade Marks Act and rules and, if found acceptable, are advertised in the *Trade marks journal*. There is a 30-day period after advertisement in which anyone can oppose the registration of a trade mark. A trade mark registration lasts for 15 years and can be renewed for further periods of 15 years.

The *Trade marks journal*, published weekly, is available from the Canadian Government Publishing Centre, Supply and Services Canada, Ottawa K1A 0S9. The Trade Marks Office has a public search room which contains details on all registered trade marks.

**Copyright.** Copyright is registered under the provisions of the Copyright Act and rules. Applications for registration and requests for information should be sent to: Copyright and Industrial Design Branch, Consumer and Corporate Affairs Canada, Ottawa-Hull K1A 0C9.

Copyright generally lasts for the life of the creator plus 50 additional years.

### 16.6.2 Industrial design and timber marks

Industrial designs are registered under provisions of the Industrial Design Act and rules. An industrial design is any original shape, pattern or ornamentation applied to an article made by an industrial process. An industrial design registration gives protection of an initial period of five years and can be renewed for a further period of up to five years. The protection given by a registered industrial design prevents anyone other than the owner from using that design in Canada during the life of the registration. There is a public search room in Hull, Que. where all previously registered designs can be searched.

Applications for registration or requests for information should be sent to: Copyright and Industrial Design Branch, Bureau of Corporate Affairs, Consumer and Corporate Affairs Canada, Ottawa-Hull K1A 0C9.

Individuals or companies floating timber on the inland waters of Ontario, Quebec and New Brunswick must, under the Timber Marking Act, select a mark or marks for the timber and apply for the

registration of such marks within one month of engaging in this business.

#### 16.6.3 Standards Council of Canada

This council, with headquarters in Ottawa, is the national co-ordinating agency through which organizations concerned with voluntary standardization may co-operate in recognizing, establishing and improving standards in Canada through a national standards system. The council promotes the development and use of standards as a means of advancing the economy, benefiting the health, safety and welfare of the public and facilitating domestic and international trade. Sponsored by the council, the system includes organizations involved in standards-writing, testing and certification. Major standards activities are carried out by the organizations which are members of the National Standards System — a federation created and co-ordinated by the council.

The objects of the council are to foster and promote voluntary standardization relating to the construction, manufacture, production, quality performance and safety of buildings, structures, manufactured articles and products and other goods.

Both Canadian and overseas standards users are served by the council's standards information service which answers inquiries pertaining to national, foreign and international standards, certification systems and technical regulations.

In the international field, the council appoints members and directs activities of the Canadian national committee of the International Electro-Technical Commission (IEC) and is the member body for Canada in the International Organization for Standardization (ISO). The council is responsible for Canada's participation in the work of these international standards-writing bodies, co-ordinating some 2,500 volunteers. It is also the Canadian sales outlet for the international standards of IEC and ISO, and the national standards of 12 other countries. The council's international standardization and standards sales branches are in Mississauga, Ont.

#### 16.6.4 Trade standards and regulations

In its consumer program, the consumer and corporate affairs department is responsible for administration of broad legislation affecting the marketplace. Policies and programming are determined by the consumer affairs bureau of the department.

**Hazardous products.** The product safety branch administers the Hazardous Products Act. The act makes specific mention of products designed for household, garden, or personal use, for use in sports or recreational activities or for use by children. It also mentions without reference to end use, poisonous, toxic, flammable, explosive and corrosive products. The minister is empowered to establish mandatory standards for application in Canada. Compliance

orders being enforced include the use of shatterproof glass in patio and shower doors, flammability standards for children's sleepwear and protective standards for hockey helmets. Regulations governing toys, rattles and cribs are designed to protect children. Other rigid specifications cover such products as matches, charcoal and ceramics.

**General commodity field.** The Consumer Packaging and Labelling Act and regulations administered by the consumer products branch are designed to give uniformity to packaging and labelling practices in Canada, reduce the possibilities of fraud and deception in packaging and labelling, and control the undue proliferation of package sizes. The legislation applies to most pre-packaged consumer products and came into effect in September 1975 for non-food items and in March 1976 for foods.

Regulations under the Textile Labelling Act, in effect since December 1972, require labels on all consumer textile articles. The label must include fibre names and percentages and the identification of the dealer. The regulations also deal with misrepresentation in both labelling and advertising. The textile care labelling system of coloured symbols recommending proper care for textile products is a voluntary program. The Canada standard size system for children's garments, developed by the Canadian Government Specifications Board in conjunction with the consumer and corporate affairs department, is administered under the National Trade Mark and True Labelling Act. This system is also voluntary, although dealers must register for a licence before claiming that the garment does, in fact, conform to the standard size and before attaching such a label to the product.

Control of marking articles of precious metal is maintained under the Precious Metals Marking Act. The regulations came into force in July 1973.

### 16.7 Provincial assistance to manufacturing

#### 16.7.1 Newfoundland

The Newfoundland development department assists prospective industry to determine desirable plant locations, prepare feasibility studies, and define raw materials, transportation and labour costs and other economic data.

Financial assistance may be provided by the Newfoundland and Labrador Development Corp. through loans against securities offered by the prospective enterprise, or by holding shares or other securities of any company in the province, with the right of the enterprise to buy back these shares. The corporation also provides management advice.

The government may provide direct financial help based on cost-benefit analyses. Buildings and land may be provided on attractive terms. Industrial

training facilities are available for specialized courses to meet requirements of incoming industry.

A market and product development program (MAPD) provides a 50% grant, to companies planning to market goods or services outside the province or within the province to substitute for goods and services being imported.

#### 16.7.2 Prince Edward Island

Industrial Enterprises Inc. (IEI), an autonomous Crown corporation with an independent board of directors composed of businessmen, provides money for new and existing manufacturing and processing industries. It identifies specific industrial opportunities, establishes their feasibility and provides management assistance in industrial engineering, marketing and finance.

The corporation makes loan capital available. It constructs and rents serviced factory buildings and provides equipment leasing. It maintains industrial property and operates industrial parks at Charlottetown and Summerside, offering serviced lots for sale to manufacturers, processors, warehousing concerns and essential service businesses. Long-term financing is provided at attractive rates of interest.

IEI establishes contact with venture capital groups in Canada and other countries which show an interest in provincial projects. Its consulting group provides management assistance to PEI companies.

#### 16.7.3 Nova Scotia

Industrial Estates Ltd. (IEL) is a Nova Scotia Crown corporation created to assist the establishment and expansion of manufacturing industries. IEL can finance, at competitive interest rates, up to 100% of the cost of land and buildings and up to 60% of the installed cost of production machinery of a new enterprise or a plant expansion. Financing land and buildings over a 20-year period and machinery over 10 years is customary. IEL can also design an incentives program to suit the needs of a project after evaluating the project's economic impact on Nova Scotia and Canada. IEL owns and operates the provincially-owned industrial parks in Nova Scotia.

An industrial malls program encourages the development of new, small businesses and industries by providing rental assistance in their first years as well as advisory and some office services.

The Nova Scotia research foundation corporation conducts research into ocean technology, chemistry, biology and geophysics and offers advisory, technical and scientific services to industry and government.

The NS department of development has other programs to help business and industry. A trade expansion program (TEP) offers grants to assist NS firms to attend trade fairs and exhibits, conduct market investigations, attend market education courses, and host incoming buyers. A product development program provides grants to NS manufacturers. A rural industry program offers

capital grants to NS businesses to establish, expand or modernize their facilities outside the Halifax-Dartmouth city limits. A consulting assistance program assists small businesses to acquire expert help in solving non-recurring problems.

Municipal tax assistance is available for limited periods for new or expanding firms, on approval by the NS departments of municipal affairs and development.

The province co-operates closely with the Cape Breton Development Corp., a federal Crown corporation, and contributes financially to some of its sponsored industry-development projects.

**The Nova Scotia resources development board**, affiliated with the Nova Scotia department of development, provides term financing on the security of fixed assets for projects defined under the Industrial Loan Act, and the Industrial Development Act. Such projects include tourism facilities, primary agriculture processing, fish plants, and saw and planing mills.

#### 16.7.4 New Brunswick

The commerce and development department is responsible for developing manufacturing and processing. Its aims are to continue to build a strong industrial base through the development of local entrepreneurs and local firms in all areas; to diversify the industrial base through the promotion of new investment from outside the province and the introduction of new technology and products; and to provide the necessary infrastructure required for economic development.

A financial analysis section makes recommendations on applications for funds to industries to locate in the province or to expand. An industrial development branch is responsible for attracting new industries to New Brunswick. A regional development division is responsible for liaison on federal-provincial development agreements, capital expenditures in provincial industrial parks and with regional industrial development commissions. A commerce and industry services branch provides management, technical and product improvement services to industry; develops markets for products; develops local processing of resources; and provides management, technical and financial services to industries in danger of failure. A planning branch evaluates cost-effectiveness of departmental programs.

Three agencies report to the commerce and development minister. A New Brunswick industrial development board recommends financial assistance to manufacturers or processors, normally through a direct loan or loan guarantee. Terms and conditions are subject to individual negotiation but specifically require the applicant to provide reasonable equity and security. Provincial Holdings Ltd., a Crown corporation, administers the province's equity position in various companies.

This agency is prepared to take an equity position in manufacturing industries wishing to locate in New Brunswick. A research and productivity council (RPC) provides technical support services for New Brunswick industry. RPC carries out research and problem-solving on a cost-recovery basis for clients in Canada and abroad. An industrial engineering service and free technical information are made available to NB (and PEI) companies by RPC in co-operation with the National Research Council.

### 16.7.5 Quebec

In Quebec the main objective of government assistance is to increase investment. For the most part, the Quebec government promotes private sector investment through its *Société de développement industriel*. This corporation provides financial support to firms investing in the province in growing manufacturing industries that use modern technology and have high productivity; firms that merge with, acquire or consolidate other firms to become more competitive and increase their market share; and firms that exhibit above-average development potential. Manufacturing companies unable to find financing elsewhere at reasonable rates may also obtain assistance. This may take a variety of forms: providing loans at current interest rates; assuming part of the borrowing costs; fully or partially underwriting a financial commitment; and buying a portion of a company's capital stock, provided that the corporation at no time has a majority interest in any company and that its total holdings of shares in a company never exceed 30% of its total assets.

Enormous financial resources are being used to modernize some of Quebec's major industries. The largest effort is a five-year pulp and paper development program calling for expenditures of over \$2.5 billion. Funds allocated by the federal and Quebec governments will defray up to 25% of the costs of plant modernization, environmental protection and energy conservation projects undertaken by the private sector. Quebec has launched a program to increase newsprint production capacity under a risk sharing formula worked out between the government and the paper mills. Knitting mills and textile and clothing manufacturers are eligible for grants under a four-year modernization program. These grants will cover between 30% and 90% of the allowable expenses.

The Quebec government has introduced tax breaks to help firms that need development capital. In 1977 the national assembly approved a new type of financial institution called *Sociétés de développement de l'entreprise québécoise* (SODEQs). These private regional corporations make risk capital available to small and medium-sized manufacturing firms and provide management advice. Shareholders of these corporations are entitled to tax reductions of up to 25% of their investment with a maximum of

\$25 per share. Manufacturing firms may benefit from accelerated depreciation allowances on machinery, equipment and antipollution devices and a number of other tax breaks. Gasoline and electricity used directly in manufacturing or processing are exempt from provincial sales tax. Manufacturing companies may also receive a full refund of tax paid on gasoline and diesel oil used as fuel for machinery or as raw materials in the manufacture of specified products. Provincial sales tax is also waived on industrial machinery used in Quebec for manufacturing or processing.

Aside from these investment incentives, the Quebec government has instituted measures to reduce risks faced by innovative companies, give them access to high-technology markets and encourage research and development. As part of its manufacturing expansion program it provides companies having high growth potential with unsecured loans; repayment depends on a project's success. Eligible firms may borrow up to \$500,000 to complete an innovative project; no interest is charged for the first two years. An industrial research centre provides research and development services and technological and industrial information services.

The government is working to open up foreign markets for Quebec businesses. The industry, trade and tourism department assigns economic advisers to Quebec delegations and offices abroad; supports firms taking part in industrial exhibitions; organizes trade missions; and disseminates information about export strategies and aspects of foreign trade. Export financing assistance administered by the *Société de développement industriel* includes support for consortiums or exporting companies; training on how to handle large contracts; installation and prospecting credits; transaction credits; financing distribution networks, sales offices or exhibition halls abroad; and export incentives in the form of interest allowances.

### 16.7.6 Ontario

The mandate of the Ontario ministry of industry and trade is to stimulate employment and income opportunity through development of Ontario's industry. The ministry assists manufacturers and service sectors to increase sales domestically and to export their products, services and technical knowledge to world markets.

The ministry's industry and trade divisions arrange for Ontario participation at trade fairs and exhibitions, organize trade missions and business opportunity missions, conduct seminars, supply information on agents and distributors and work closely with trading houses.

A program initiated in 1980 provides funding for hiring Ontario business or marketing grads to help exporters develop or expand their international marketing efforts.

The Ontario International Corp. (OIC) is a marketing agency for the government in Ontario. It explores world market opportunities for private sector service industries and public sector agencies in the development of major capital projects abroad. Its educational services division seeks markets for Ontario's education resources and services. OIC is not a funding agency. It offers marketing and advisory services to Ontario engineers, consultants, architects, contractors, management consultants and other ministries and agencies.

The ministry's small business division provides services such as entrepreneurial development, employer's skill search and consulting services regarding plant locations, industrial parks and marketing.

The ministry acts as a catalyst in creating joint ventures, licensing agreements between foreign manufacturers and Ontario companies and attracting new investment. It also promotes inventions and assists Ontario manufacturing capabilities for production.

The ministry has 18 field offices in Ontario and international offices in Chicago, Dallas, Atlanta, New York, Los Angeles, Boston, Philadelphia, San Francisco, Hong Kong, Paris, Tokyo, Frankfurt, Brussels and London, England.

#### 16.7.7 Manitoba

The Manitoba department of business development and tourism, in consultation with a variety of broadly based advisory boards and committees, implements government programs and services through six primary line functions: industrial development, trade development, small enterprise development, program development and technical services, administrative and internal services, and Travel Manitoba. Small enterprise development is responsible for managing the small business component of the Manitoba interest rate relief program. This two-year program introduced in March 1982 offers limited one-time assistance to small business facing high interest rates. Other program components extend assistance to homeowners and farmers.

Assistance is offered to the private sector in all aspects of establishing or expanding manufacturing facilities including: identification of new manufacturing opportunities, engineering and technical advice, new product design and development, human resources planning, economic and market research, manufacturing and licence agreements, and development of export markets.

Delivery of these programs and services has been enhanced under Enterprise Manitoba, a \$44 million federal-provincial shared-cost agreement. Enterprise Manitoba operates enterprise development centres in Winnipeg, Brandon and Dauphin, the Industrial Technology Centre in Winnipeg and the Canadian Food Products Development Centre in Portage la Prairie.

#### 16.7.8 Saskatchewan

The Saskatchewan economic development and trade department is the primary agency responsible for economic development policy. The department works to attract investment and increase the sale of Saskatchewan products and services domestically and abroad.

Investment and permanent employment in manufacturing and processing are stimulated by an industrial incentive program. This program provides incentive payments based on the introduction of new capital and the number of new jobs created. The government will provide \$7,500 for each permanent job created to a maximum of 25% of capital costs. Processing of the incentive payment takes place 12 months after the enrolment date of the new jobs.

An applicant must invest at least \$30,000 and create at least one full-time job. Projects have to be brought into commercial production within 12 months after application has been approved.

New jobs must be in place six months after the start of commercial production and be maintained continuously for at least 12 months. Any new or existing manufacturer or processor may apply.

To provide prospective investors with funding assistance to develop manufacturing and processing projects in Saskatchewan, the government has set up a cost-shared studies program. The department will fund a study for an applicant to a maximum of 50% of the cost to a maximum of \$25,000. Final payments are made at completion of the study.

An aid to trade program helps Saskatchewan manufacturers and processors who have products or technology exportable or ready for sale, by introducing new products to a market or developing new markets for existing products.

Projects can include market research, product promotion and advertising, participation in trade fairs and trade missions and partial subsidies for sample shipments and costs for incoming buyers. There is no funding limit.

A market development fund program assists the development and expansion of markets for agriculture and food products from Saskatchewan. There is no funding limit. Assistance is available to Saskatchewan individuals, associations, corporations, co-operatives or marketing agencies for trade and market development, product or process development, market research, feasibility studies and transport capability development.

A major products branch provides supplier lists and profiles of Saskatchewan firms to potential purchasers. The branch also gives local companies up-to-date listings of planned products.

#### 16.7.9 Alberta

The Alberta Opportunity Co. (AOC), a Crown agency, promotes economic growth by stimulating new businesses and aiding existing enterprises. AOC

gives priority to Albertans and Alberta-owned enterprises, small businesses and centres of small population.

To qualify for assistance, a business may be a proprietorship, partnership, co-operative or corporate body, must operate for gain or profit, must be in Alberta and must provide assurance that any aid given will be used exclusively in Alberta. Eligible businesses include manufacturing, processing and assembly operations, service industries, commercial wholesale and retail trade, recreational facilities, tourist establishments, local development organizations, student business enterprises and new industries which are unique and valuable additions to the province. The program is not designed for finance companies, suppliers of residential accommodation other than tourist facilities, public utilities including power generation and distribution, or resource-based industries such as mining and oil and gas production.

Assistance may provide for establishing new businesses, acquiring fixed assets — land, buildings and equipment — expanding existing facilities, strengthening working capital, financing raw material or finished inventories for manufacturers, and research and development. Funds are made available directly or by guarantee in various forms.

Business counselling services of AOC include management advice and guidance on financial, technical and marketing matters for small and intermediate-sized Alberta businesses which cannot afford to obtain this type of help elsewhere. Services are provided through the company's head office in Ponoka and branch offices in Calgary, Lethbridge, Grande Prairie, St. Paul, Medicine Hat, Edson, Edmonton, Peace River, Vermillion, Red Deer and Brooks.

#### 16.7.10 British Columbia

The ministry of industry and small business has programs, services and expertise for industry, the business community and government agencies. Goals of British Columbia's economic strategy are growth of employment and real income, improved efficiency, price and incomes stability, balanced regional economic development and industrial diversification.

An economic analysis and research bureau carries out research and long-term economic assessment, planning and forecasting. This complements the ministry's statistical and financial analysis and the policy planning and budgetary functions of the ministry of finance. The program implementation and co-ordination division designs, negotiates and monitors intergovernmental and government-industry programs, and provides their financial management. The trade and industry division helps manufacturers develop, finds new export markets for BC goods and services and encourages new investment by BC companies and firms elsewhere in Canada and abroad. It sponsors trade missions and trade shows. The division also supports and strengthens small enterprises through financial assistance, problem solving, specialized research, management training and counselling. A central statistics bureau collects and disseminates information on economic and social characteristics of the province and its regions.

The ministry maintains liaison with the British Columbia Development Corp. for development of serviced industrial land in areas where it was not previously available, or where high land costs prohibited location of individual firms. It provides loans to businesses to expand existing operations or create new ones. The ministry maintains a trade office and economic adviser at British Columbia House in London, England.

#### Sources

- 16.1 - 16.3 Manufacturing and Primary Industries Division, Economic Statistics Field, Statistics Canada.
- 16.4 Communications Branch, Department of Regional Industrial Expansion; Canadian Industrial Renewal Board.
- 16.5 Canada Development Corp.
- 16.6 - 16.6.2, 16.6.4 Communications Branch, Department of Consumer and Corporate Affairs.
- 16.6.3 Public Relations, Standards Council of Canada.
- 16.7 Supplied by the respective provincial government departments.

#### Selected references

- Capacity utilization rates in Canadian manufacturing*, third quarter, 1983. Statistics Canada 31-003, Ottawa, 1984.
- Concepts and definitions of the census of manufactures*. Statistics Canada 31-528, Ottawa, June 1979.
- Consumption of purchased fuel and electricity by the manufacturing, mining, logging and electrical power industries*. Statistics Canada 57-208 (annual), Ottawa, August 1983.
- Destination of shipments of manufacturers*. Statistics Canada 31-530, Ottawa, January 1983.
- Domestic and foreign control of manufacturing, mining and logging establishments in Canada*. Statistics Canada 31-401, Ottawa, 1981.

- Industrial organization and concentration in the manufacturing, mining and logging industries.* Statistics Canada 31-402, Ottawa, October 1983.
- Industry price indexes,* December 1983. Statistics Canada 62-211 (annual), Ottawa, 1984.
- Inventories, shipments and orders in manufacturing industries,* December 1983. Statistics Canada 31-001, Ottawa, 1984.
- Investment statistics: manufacturing sub-industries and selected energy related industries, outlook.* Statistics Canada 61-214 (annual), Ottawa, 1983.
- Manufacturing industries of Canada: national and provincial areas,* 1981. Statistics Canada 31-203 (annual), Ottawa, 1983.
- Manufacturing industries of Canada: sub-provincial areas.* Statistics Canada 31-209 (annual), Ottawa, December 1983.
- Products shipped by Canadian manufacturers.* Statistics Canada 31-211 (annual), Ottawa, January 1984.

# TABLES

.. not available  
 ... not appropriate or not applicable  
 - nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

## 16.1 Value of shipments of goods of own manufacture, by province (million dollars)

Province or territory	1969	1979	1980	1981	1982
Newfoundland	242.4	1,028.0	1,096.9	1,241.3	1,288.5
Prince Edward Island	56.9	212.5	234.4	247.0	255.2
Nova Scotia	731.5	3,212.5	3,454.4	3,822.6	3,610.7
New Brunswick	708.9	2,970.5	3,560.6	3,844.2	3,323.7
Quebec	12,810.2	39,117.3	44,602.6	50,139.1	49,179.4
Ontario	23,847.8	76,220.2	82,190.4	93,989.5	93,939.3
Manitoba	1,230.0	3,914.7	4,357.1	4,977.0	4,839.5
Saskatchewan	530.4	1,863.3	2,118.2	2,503.6	2,488.1
Alberta	1,849.3	8,940.0	10,520.8	13,437.1	13,278.3
British Columbia	3,917.8	14,627.8	15,893.1	16,793.4	15,689.8
Yukon and Northwest Territories	5.2	26.3	30.3	34.9	40.4
Canada	45,930.4	152,133.1	168,058.7	191,029.7	187,932.9

## 16.2 Value of shipments of goods of own manufacture, by industry group (million dollars)

Industry group	1979	1980	1981	1982
Food and beverage industries	25,372.7	28,203.4	31,765.9	32,930.1
Tobacco products industries	1,113.9	1,212.2	1,374.8	1,493.8
Rubber and plastics products industries	3,772.2	4,093.4	4,513.2	4,433.6
Leather industries	1,069.3	1,083.8	1,218.8	1,106.0
Textile industries	4,074.6	4,414.0	5,051.8	4,507.6
Knitting mills	830.0	944.7	1,012.3	947.8
Clothing industries	3,679.9	3,867.1	4,090.2	3,962.3
Wood industries	8,808.5	8,397.2	8,436.9	7,173.0
Furniture and fixture industries	2,061.7	2,322.5	2,772.8	2,494.1
Paper and allied industries	12,286.6	14,502.8	15,729.4	14,784.0
Printing, publishing and allied industries	4,721.5	5,623.2	6,463.6	6,779.3
Primary metal industries	11,856.5	13,545.5	14,449.5	12,402.4
Metal fabricating industries (except machinery and transportation equipment industries)	10,397.2	11,718.2	12,375.7	11,765.7
Machinery industries (except electrical machinery)	6,528.5	7,649.2	8,689.0	7,662.2
Transportation equipment industries	19,667.0	18,993.3	21,681.3	22,656.6
Electrical products industries	6,660.6	7,765.3	8,938.4	8,714.4
Non-metallic mineral products industries	4,091.5	4,225.2	4,769.3	4,385.3
Petroleum and coal products industries	12,370.8	14,530.3	20,453.3	21,709.1
Chemical and chemical products industries	9,531.0	11,218.6	13,189.5	14,095.4
Miscellaneous manufacturing industries	3,239.1	3,748.6	4,054.0	3,930.2
All manufacturing industries	152,133.1	168,058.7	191,029.7	187,932.9

## 16.3 Net profit<sup>1</sup> as a percentage of total revenue of corporations

Industry group	1979	1980	1981
Food and beverage industries	4.1	3.7	3.5
Rubber industries	6.4	5.4	5.8
Textile industries <sup>2</sup>	6.4	5.5	4.4
Wood industries <sup>3</sup>	9.7	4.5	1.4
Paper and allied industries	9.9	13.2	9.8
Printing, publishing and allied industries	8.3	8.5	8.9
Primary metal industries	11.1	11.1	9.5
Metal fabricating industries	8.0	6.9	6.8
Machinery industries	6.7	5.3	4.3
Transportation equipment industries	3.8	0.9	1.4
Electrical products industries	6.2	6.5	6.7
Non-metallic mineral products industries	7.1	7.3	6.3
Petroleum and coal products industries	12.4	12.8	9.9
Chemical and chemical products industries	9.4	10.2	8.9
Miscellaneous manufacturing industries <sup>4</sup>	7.1	6.7	6.5
All manufacturing industries	7.5	7.1	6.1

<sup>1</sup>Before taxes and extraordinary items.

<sup>2</sup>Includes knitting mills and clothing industries.

<sup>3</sup>Includes furniture and fixture industries.

<sup>4</sup>Includes tobacco and leather industries.

## 16.4 Summary statistics, annual census of manufacturers, 1970-82

Year	Establishments No.	Manufacturing activity					
		Production and related workers			Cost of fuel and electricity <sup>1</sup> \$'000	Cost of materials and supplies used \$'000	Value of shipments of goods of own manufacture \$'000
		Number	Man-hours paid '000	Wages \$'000			
1970	31,928	1,167,063	2,450,058	7,232,256	903,264	25,699,999	46,380,935
1971	31,908	1,167,810	2,448,419	7,819,050	1,000,243	27,661,379	50,275,917
1972	31,553	1,213,106	2,547,609	8,763,104	1,078,916	31,137,946	56,190,740
1973	31,145	1,275,985	2,665,681	10,060,062	1,221,885	37,600,538	66,674,393
1974	31,535	1,300,792	2,713,436	11,637,073	1,623,617	47,499,791	82,455,109
1975	30,100	1,271,786	2,613,062	12,699,228	1,805,398	51,177,942	88,427,031
1976	29,053	1,276,693	2,650,230	14,697,394	2,325,264	56,982,416	98,280,777
1977	27,716	1,242,103	2,577,429	15,814,667	2,790,351	63,015,412	108,881,959
1978 <sup>2</sup>	31,963	1,310,293 <sup>2</sup>	2,720,935	17,928,190	3,397,375 <sup>2</sup>	74,919,990 <sup>2</sup>	128,889,376 <sup>2</sup>
1979 <sup>3</sup>	34,578	1,360,883	2,834,642	20,376,979	3,879,624	90,270,324	152,133,081
1980	35,495	1,346,187	2,780,203	22,162,309	4,448,859	99,897,576	168,058,662
1981	35,780	1,337,433	2,755,669	24,539,352	5,468,509	114,283,081	191,029,704
1982	35,834	1,212,424	2,473,214	24,261,593	6,028,226	112,059,609	187,932,882
Total activity							
		Working owners and partners		Total employees <sup>4</sup>		Cost of materials and supplies used and goods purchased for resale <sup>5</sup> \$'000	Value of shipments and other revenue <sup>6</sup> \$'000
		Number	Withdrawals \$'000	Number	Salaries and wages \$'000		
1970	31,928	10,760	58,605	1,637,001	11,363,712	30,805,904	52,886,022
1971	31,908	10,286	60,939	1,628,404	12,129,897	33,462,590	57,479,421
1972	31,553	9,793	..	1,676,130	13,414,609	37,663,105	64,360,301
1973	31,145	8,981	..	1,751,066	15,220,033	45,697,053	76,689,795
1974	31,535	7,067	..	1,785,977	17,556,982	57,794,605	95,030,218
1975	30,100	6,977	..	1,741,159	19,156,679	62,384,245	102,148,633
1976	29,053	5,666	..	1,743,047	21,799,733	69,487,283	113,416,996
1977	27,716	4,859	..	1,704,583	23,595,238	77,761,372	126,324,545
1978	31,963	6,008 <sup>7</sup>	..	1,790,618 <sup>7</sup>	26,571,596 <sup>7</sup>	91,866,286	148,742,898
1979	34,578	6,574	..	1,855,393	30,112,290	110,772,016	176,352,327
1980	35,495	6,385	..	1,850,436	33,133,061	121,105,853	193,310,632
1981	35,780	5,930	..	1,853,968	37,106,195	137,410,611	218,550,416
1982	35,834	5,405	..	1,708,850	37,695,397	134,197,158	214,429,419

<sup>1</sup>Cannot be reported separately for manufacturing and non-manufacturing activities but related substantially to manufacturing activity.  
<sup>2</sup>Some 3,820 establishments with manufacturing shipments of \$2,257 million were added to the census in 1978 as a result of improved coverage, mostly of small establishments.

<sup>3</sup>Some 1,142 establishments with manufacturing shipments of \$557 million were added to the census in 1979 as a result of improved coverage, mostly of small establishments.

<sup>4</sup>Includes production and related workers, administrative and office employees, sales, distribution and other employees; excludes working owners and partners.

<sup>5</sup>Includes supplies used in both manufacturing and non-manufacturing activity.

<sup>6</sup>Includes shipments of goods of own manufacture, value of shipments of goods purchased for resale and other operational revenue.

<sup>7</sup>Value of total operational revenue less total cost of materials, supplies, fuel and electricity used and goods purchased for resale in the same condition; all adjusted for inventory changes where required.

## 16.5 Establishments in the manufacturing industries, by number employed and by province, 1979-82

Year and province or territory	Number employed									Total
	Under 5	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or over	
Number of establishments										
1979	114	44	33	45	32	41	5			314
Newfoundland	56	29	30	31	59	36	7	4		150
Prince Edward Island	262	106	144	130	45	44	29	6	3	775
Nova Scotia	194	108	100	97	986	568	362	82	52	626
New Brunswick	2,717	1,809	1,779	2,026	986	568	362	82	52	10,381
Quebec	3,738	2,319	2,268	2,620	1,356	925	629	170	79	14,104
Ontario										

### 16.5 Establishments in the manufacturing industries, by number employed and by province, 1979-82 (concluded)

Year and province or territory	Number employed									Total
	Under 5	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or over	
Manitoba	413	208	225	225	112	101	30	← 14 →		1,328
Saskatchewan	284	149	117	108	46	24	13	← 3 →		744
Alberta	738	432	409	400	164	100	48	← 14 →		2,305
British Columbia	1,468	695	577	510	248	151	124	37	12	3,822
Yukon and Northwest Territories	8	7	9	← 5 →		—	—	—	—	29
Canada	9,992	5,906	5,691	6,182	3,063	1,972	1,284	332	156	34,578
1980										
Newfoundland	115	45	34	53	30	22	18	1	2	320
Prince Edward Island	62	35	20	21	10	1	3	—	—	152
Nova Scotia	259	144	155	126	57	35	27	8	4	815
New Brunswick	190	116	110	103	41	44	27	8	2	641
Quebec	2,944	1,915	1,827	2,036	987	556	341	88	46	10,740
Ontario	3,808	2,484	2,351	2,663	1,344	933	625	168	78	14,454
Manitoba	394	218	213	216	129	94	33	10	4	1,311
Saskatchewan	312	133	122	113	50	24	14	2	1	771
Alberta	720	475	439	402	186	100	51	15	—	2,388
British Columbia	1,391	772	595	534	251	162	128	31	11	3,875
Yukon and Northwest Territories	6	10	6	4	2	—	—	—	—	28
Canada	10,201	6,347	5,872	6,271	3,087	1,971	1,267	331	148	35,495
1981										
Newfoundland	110	44	37	54	23	28	14	4	2	316
Prince Edward Island	56	35	24	22	8	3	2	—	—	150
Nova Scotia	277	136	132	143	58	32	25	7	4	814
New Brunswick	195	105	101	105	42	41	28	6	3	626
Quebec	3,155	1,948	1,807	2,021	958	547	348	84	47	10,915
Ontario	3,905	2,494	2,396	2,604	1,328	963	619	163	81	14,553
Manitoba	392	221	217	203	117	88	35	10	5	1,288
Saskatchewan	289	150	124	108	49	26	15	2	1	764
Alberta	713	464	483	442	175	104	55	14	2	2,452
British Columbia	1,380	764	593	567	237	167	127	28	11	3,874
Yukon and Northwest Territories	6	5	11	5	1	—	—	—	—	28
Canada	10,478	6,366	5,925	6,274	2,996	1,999	1,268	318	156	35,780
1982										
Newfoundland	101	32	44	51	26	← 4 →	41	—	—	295
Prince Edward Island	← 74 →	151	140	132	51	29	23	7	4	127
Nova Scotia	244	115	99	99	42	38	23	4	3	781
New Brunswick	168	115	99	99	42	38	23	4	3	591
Quebec	3,199	1,955	1,800	1,967	900	507	309	71	45	10,753
Ontario	4,037	2,595	2,521	2,661	1,343	895	556	147	67	14,822
Manitoba	379	218	234	218	106	84	24	12	4	1,279
Saskatchewan	273	152	133	112	41	23	← 15 →	—	—	749
Alberta	742	517	476	429	168	94	53	← 11 →	—	2,490
British Columbia	1,519	751	595	548	211	153	112	19	11	3,919
Yukon and Northwest Territories	← 9 →	← 19 →	—	—	—	—	—	—	—	28
Canada	10,710	6,521	6,072	6,246	2,897	1,847	1,129	274	138	35,834

### 16.6 Establishments in manufacturing industries, by industry group and number employed, 1979-82

Year and industry group	Establishments with total employment of									Total
	Under 5	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or over	
1979										
Food and beverage	1,564	822	737	734	399	283	201	37	14	4,791
Tobacco products	3	1	5	3	1	4	4	3	2	26
Rubber and plastics products	216	140	164	239	116	69	40	7	8	999
Leather	86	57	64	102	64	45	26	3	—	447
Textile	213	161	175	172	84	72	67	16	7	967
Knitting mills	25	24	36	79	48	43	25	1	—	281
Clothing	389	265	353	594	325	172	73	7	1	2,179

# 16.6 Establishments in manufacturing industries, by industry group and number employed, 1979-82

(continued)

Year and industry group	Establishments with total employment of									Total
	Under 5	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or over	
Wood	1,069	529	521	515	255	184	113	18	4	3,208
Furniture and fixtures	942	360	293	329	145	82	38	1	—	2,190
Paper and allied industries	57	63	74	170	97	115	86	45	25	732
Printing, publishing and allied industries	1,508	927	725	558	206	96	52	16	5	4,093
Primary metal	33	50	44	98	54	59	62	20	21	441
Metal fabricating (except machinery and transportation equipment)	1,278	951	922	978	399	195	113	23	3	4,862
Machinery (except electrical)	287	210	233	361	195	106	67	20	12	1,491
Transportation equipment	299	185	168	211	131	82	69	39	32	1,216
Electrical products	220	124	176	168	147	106	84	36	15	1,076
Non-metallic mineral products	455	298	322	265	95	82	38	10	1	1,566
Petroleum and coal products	20	21	10	12	11	14	16	4	—	108
Petroleum and chemical products	264	178	224	230	132	90	70	20	4	1,212
Miscellaneous manufacturing	1,064	540	445	364	159	73	40	6	2	2,693
1980										
Food and beverage	1,383	845	726	773	409	286	195	37	13	4,667
Tobacco products	3	1	3	4	2	3	4	3	2	25
Rubber and plastics products	194	145	181	243	126	64	38	8	8	1,007
Leather	84	55	57	100	62	46	24	3	—	431
Textile	207	160	154	182	78	77	69	15	6	948
Knitting mills	33	24	38	73	42	44	26	1	—	281
Clothing	385	282	370	568	295	162	73	8	—	2,143
Wood	1,148	610	551	500	252	172	113	14	3	3,363
Furniture and fixtures	1,052	405	301	339	159	76	36	1	—	2,369
Paper and allied industries	62	58	80	179	115	120	79	46	25	764
Printing, publishing and allied industries	1,528	995	785	574	205	98	53	18	6	4,262
Primary metal	45	43	50	102	64	60	55	22	19	460
Metal fabricating (except machinery and transportation equipment)	1,362	1,028	1,013	963	403	192	98	24	3	5,086
Machinery (except electrical)	322	231	252	370	204	116	73	22	11	1,601
Transportation equipment	350	202	178	225	132	84	68	34	29	1,302
Electrical products	197	122	168	214	139	114	88	34	16	1,092
Non-metallic mineral products	446	339	314	246	103	72	41	10	1	1,572
Petroleum and coal products	21	22	10	15	11	12	15	5	1	112
Chemical and chemical products	247	188	200	245	139	94	75	21	3	1,212
Miscellaneous manufacturing	1,132	592	441	357	146	79	44	5	2	2,798
1981										
Food and beverage	1,163	842	754	799	392	302	189	39	12	4,492
Tobacco products	3	2	2	4	1	4	4	3	2	25
Rubber and plastics products	181	155	189	262	126	68	35	5	9	1,030
Leather	79	44	53	98	63	54	21	2	1	415
Textile	200	175	159	176	80	73	70	12	7	952
Knitting mills	30	24	34	65	39	43	26	1	—	262
Clothing	375	255	388	567	312	140	79	8	1	2,125
Wood	1,264	582	532	471	237	188	105	13	2	3,394
Furniture and fixtures	1,178	375	292	330	174	74	40	1	—	2,464
Paper and allied industries	65	60	96	153	109	122	83	43	27	758
Printing, publishing and allied industries	1,655	1,053	838	584	203	101	51	16	7	4,508
Primary metal	75	35	32	82	56	67	49	23	20	439
Metal fabricating (except machinery and transportation equipment)	1,419	979	1,022	969	354	206	99	21	3	5,072
Machinery (except electrical)	288	262	260	387	197	118	80	20	8	1,620
Transportation equipment	339	189	177	228	118	87	64	37	31	1,270
Electrical products	218	135	154	210	142	120	90	33	19	1,121
Non-metallic mineral products	434	360	312	243	102	72	42	8	1	1,574
Petroleum and coal products	23	21	8	14	11	12	15	6	1	111
Chemical and chemical products	248	205	206	253	134	83	79	21	3	1,232
Miscellaneous manufacturing	1,241	613	417	379	146	65	47	6	2	2,916
1982										
Food and beverage	1,131	813	724	779	392	302	186	30	15	4,372
Tobacco products	3	2	2	4	1	4	4	3	2	25
Rubber and plastics products	212	161	187	248	123	59	35	5	9	1,036
Leather	75	43	71	100	58	53	21	2	1	419
Textile	200	175	159	176	80	74	70	12	7	989
Knitting mills	30	24	34	66	42	41	26	1	—	255
Clothing	375	255	388	567	312	140	79	8	1	2,107
Wood	1,283	591	546	465	237	188	105	13	2	3,353
Furniture and fixtures	1,199	389	322	330	174	74	40	1	—	2,489
Paper and allied industries	65	68	100	168	120	102	86	40	24	773
Printing, publishing and allied industries	1,657	1,123	868	605	200	167	51	16	7	4,620

16.6 Establishments in manufacturing industries, by industry group and number employed, 1979-82 (concluded)

Year and industry group	Establishments with total employment of									Total	
	Under 5	5 to 9	10 to 19	20 to 49	50 to 99	100 to 199	200 to 499	500 to 999	1,000 or over		
Primary metal	60	35	52	← 216 →			45	20	18	446	
Metal fabricating (except machinery and transportation equipment)	1,519	1,063	1,036	929	334	174	75	17	3	5,150	
Machinery (except electrical)	339	262	299	398	185	105	69	17	5	1,679	
Transportation equipment	318	176	173	216	123	76	60	30	30	1,202	
Electrical products	225	139	161	← 468 →		66	77	35	11	1,116	
Non-metallic mineral products	← 816 →		← 521 →		92	66	33	← 7 →		1,535	
Petroleum and coal products	← 125 →				← 83 →						125
Chemical and chemical products	← 663 →		← 374 →		← 83 →		76	← 25 →		1,221	
Miscellaneous manufacturing	1,269	607	← 933 →		← 111 →		76	← 3 →		2,923	

16.7 Analysis of value of shipments by establishments in manufacturing industries, 1979-82

Year and shipment size of establishment	Establishments No.	Value of shipments of goods of own manufacture \$'000	Average per establishment \$'000	Proportion of total shipments %
1979				
Up to \$99,999	7,367	363,131	49.3	0.2
\$ 100,000 - \$ 199,999	4,395	638,666	145.3	0.4
200,000 - 499,999	6,080	1,981,348	325.9	1.3
500,000 - 999,999	4,391	3,147,585	716.8	2.1
1,000,000 - 4,999,999	7,696	17,617,505	2,289.2	11.6
5,000,000 - 9,999,999	2,016	14,343,110	7,114.6	9.4
10,000,000 - 24,999,999	1,609	25,082,481	15,588.9	16.5
25,000,000 - 49,999,999	556	19,145,685	34,434.7	12.6
50,000,000 and over	468	69,813,568	149,174.3	45.9
Total and average	34,578	152,133,081	4,400.0	100.0
1980				
Up to \$99,999	6,996	345,956	49.5	0.2
\$ 100,000 - \$ 199,999	4,474	649,439	145.2	0.4
200,000 - 499,999	6,302	2,058,076	326.6	1.2
500,000 - 999,999	4,549	3,253,833	715.3	1.9
1,000,000 - 4,999,999	8,182	18,869,289	2,306.2	11.2
5,000,000 - 9,999,999	2,120	15,098,667	7,122.0	9.0
10,000,000 - 24,999,999	1,735	26,992,646	15,557.7	16.1
25,000,000 - 49,999,999	625	21,416,849	34,267.0	12.7
50,000,000 and over	512	79,373,908	155,027.2	47.2
Total and average	35,495	168,058,662	4,734.7	100.0
1981				
Up to \$99,999	6,409	325,284	50.8	0.2
\$ 100,000 - \$ 199,999	4,461	651,951	146.1	0.3
200,000 - 499,999	6,378	2,085,166	326.9	1.1
500,000 - 999,999	4,629	3,321,892	717.6	1.7
1,000,000 - 4,999,999	8,508	19,757,096	2,322.2	10.4
5,000,000 - 9,999,999	2,231	15,890,280	7,122.5	8.3
10,000,000 - 24,999,999	1,891	29,474,907	15,586.9	15.4
25,000,000 - 49,999,999	681	23,430,484	34,406.0	12.3
50,000,000 and over	592	96,092,644	162,318.7	50.3
Total and average	35,780	191,029,704	5,339.0	100.0
1982				
Up to \$99,999	6,205	314,600	50.7	0.2
\$ 100,000 - \$ 199,999	4,358	635,106	145.7	0.3
200,000 - 499,999	6,708	2,193,341	327.0	1.2
500,000 - 999,999	4,783	3,422,047	715.5	1.8
1,000,000 - 4,999,999	8,544	19,540,300	2,287.0	10.4
5,000,000 - 9,999,999	2,201	15,590,220	7,083.2	8.3
10,000,000 - 24,999,999	1,809	28,115,277	15,541.9	15.0
25,000,000 - 49,999,999	666	22,953,768	34,465.1	12.2
50,000,000 and over	560	95,168,222	169,943.3	50.6
Total and average	35,834	187,932,882	5,244.5	100.0

### 16.8 Establishments in manufacturing industries, by value of shipments of own manufactured goods, for Canada 1978-82 and by province, 1980-82

Year and area	Up to \$99,999	\$100,000 to \$199,999	\$200,000 to \$499,999	\$500,000 to \$999,999	\$1,000,000 to \$4,999,999	\$5,000,000 to \$9,999,999	\$10,000,000 to \$24,999,999	\$25,000,000 to \$49,999,999	\$50,000,000 and over	Total
Canada										
1978	6,774	4,050	5,655	4,296	7,119	1,822	1,388	477	382	31,963
1979	7,367	4,395	6,080	4,391	7,696	2,016	1,609	556	468	34,578
1980	6,996	4,474	6,302	4,549	8,182	2,120	1,735	625	512	35,495
1981	6,409	4,461	6,378	4,629	8,508	2,231	1,891	681	592	35,780
1982	6,205	4,358	6,708	4,783	8,544	2,201	1,809	666	560	35,834
1980										
Nfld.	93	35	34	32	34	4	122	4	4	320
PEI	45	23	22	20	164	47	34	5	14	152
NS	210	95	156	90	126	47	28	10	11	815
NB	152	69	122	76	2,597	583	432	154	142	10,740
Que.	2,116	1,326	1,961	1,429	3,424	983	834	325	228	14,454
Ont.	2,583	1,759	2,441	1,877	3,000	87	69	19	10	1,311
Man.	267	157	242	160	150	33	27	4	7	771
Sask.	208	110	140	92	573	126	98	27	43	2,388
Alta.	419	328	461	313	734	181	195	78	53	3,875
BC	902	563	715	454						
YT and NWT	10		8	6	4					28
1981										
Nfld.	47	17	26	16	175	47	33	10	12	316
PEI	209	96	145	87	134	41	33	9	12	150
NS	137	68	112	81	2,671	633	462	172	168	814
NB	2,083	1,397	1,942	1,387	3,544	1,020	920	343	271	10,915
Que.	2,326	1,705	2,495	1,929	314	73	74	23	13	14,553
Ont.	238	159	225	169	157	38	32	37	49	1,288
Man.	178	116	140	93	630	149	110	80	55	764
Sask.	354	316	473	334	767	192	209			2,452
Alta.	751	555	776	489						3,874
BC										
YT and NWT	8		4	10	6					28
1982										
Nfld.	77	16	47	25	167	47	36	9	12	295
PEI	31	13	19	21	139	37	32	7	14	127
NS	176	84	167	83	2,599	609	450	165	162	781
NB	114	51	125	72	3,675	1,035	872	344	244	591
Que.	2,032	1,370	1,962	1,404	309	73	75	22	13	10,753
Ont.	2,266	1,667	2,658	2,061	163	35	32	6	7	14,822
Man.	217	157	252	161	629	143	110	37	50	1,279
Sask.	147	114	155	90	749	190	181	69	53	749
Alta.	349	298	506	368						2,490
BC	793	585	810	489						3,919
YT and NWT	3	3	7	9	6					

### 16.9 Analysis of employment in establishments in manufacturing industries, 1979-82

Year and size of establishment by number employed <sup>1</sup>	Establishments No.	Employees No.	Working owners and partners No.	Proportion of total employment %
1979				
Under 5 employed	9,992	17,977	4,681	1.0
5 - 9	5,906	38,241	1,438	2.1
10 - 19	5,691	78,282	329	4.2
20 - 49	6,182	193,659	107	10.4
50 - 99	3,063	214,268	8	11.5
100 - 199	1,972	277,455	9	15.0
200 - 499	1,284	387,054	2	20.9
500 - 999	332	224,808	—	12.1
1,000 or more	156	328,144	—	17.7
Head offices	—	95,505	—	5.1
Total	34,578	1,855,393	6,574	100.0
1980				
Under 5 employed	10,201	19,265	4,524	1.0
5 - 9	6,347	41,065	1,399	2.2
10 - 19	5,872	80,588	304	4.4
20 - 49	6,271	195,528	128	10.6
50 - 99	3,087	215,111	24	11.6

**16.9 Analysis of employment in establishments in manufacturing industries, 1979-82 (concluded)**

Year and size of establishment by number employed <sup>1</sup>		Estab- lishments No.	Employees No.	Working owners and partners No.	Proportion of total employment %
100 - 199	"	1,971	277,727	2	15.0
200 - 499	"	1,267	381,676	4	20.6
500 - 999	"	331	225,439	—	12.2
1,000 or more	"	148	315,657	—	17.1
Head offices		—	98,380	—	5.3
Total		35,495	1,850,436	6,385	100.0
1981					
Under 5	employed	10,478	20,193	4,356	1.1
5 - 9	"	6,366	41,506	1,150	2.2
10 - 19	"	5,925	81,109	265	4.4
20 - 49	"	6,274	196,654	121	10.6
50 - 99	"	2,996	208,008	33	11.2
100 - 199	"	1,999	280,379	3	15.1
200 - 499	"	1,268	382,350	2	20.6
500 - 999	"	318	216,685	—	11.7
1,000 or more	"	156	322,704	—	17.4
Head offices		—	104,380	—	5.6
Total		35,780	1,853,968	5,930	100.0
1982					
Under 5	employed	10,710	20,966	4,101	1.2
5 - 9	"	6,521	42,782	969	2.5
10 - 19	"	6,072	83,509	184	4.9
20 - 49	"	6,246	194,378	124	11.4
50 - 99	"	2,897	202,134	13	11.8
100 - 199	"	1,847	258,247	8	15.1
200 - 499	"	1,129	336,210	6	19.7
500 - 999	"	274	187,105	—	11.0
1,000 or more	"	138	282,017	—	16.5
Head offices		—	101,502	—	5.9
Total		35,834	1,708,850	5,405	100.0

<sup>1</sup>Includes working owners and partners.**16.10 Trends in domestic exports of manufactures (customs basis), 1970-83 (million dollars)**

Year	Fabricated materials	End products	Total manufactured goods <sup>1</sup>
1970	5,866.4	5,551.0	11,417.4
1971	5,796.8	6,193.2	11,990.0
1972	6,758.2	7,136.2	13,894.4
1973	8,223.9	8,386.6	16,610.5
1974	10,695.7	9,236.8	19,932.5
1975	9,883.8	10,472.7	20,356.5
1976	12,227.6	12,711.2	24,938.8
1977	14,926.9	15,231.2	30,158.1
1978	19,155.0	18,855.3	38,010.3
1979	24,375.6	20,923.8	45,299.4
1980	29,344.9	21,850.5	51,195.4
1981	30,540.3	25,473.3	56,013.6
1982	27,865.1	28,690.8	56,555.9
1983	30,011.1	33,472.3	53,483.4

<sup>1</sup>These categories of exports are only approximately equivalent to exports of manufactured goods.**16.11 Destination of manufacturing shipments by region, by value and per cent, 1979<sup>1</sup>**

Destination region of shipments	Manufacturing region				
	Value of shipments received \$'000,000				
	Atlantic	Quebec	Ontario	Prairies	British Columbia
Atlantic	3,369	1,273	2,151	148	92
Quebec	637	19,392	8,019	907	244
Ontario	626	6,665	37,542	1,025	466

### 16.11 Destination of manufacturing shipments by region, by value and per cent, 1979<sup>1</sup> (concluded)

Destination region of shipments	Manufacturing region				
	Value of shipments received \$'000,000				
	Atlantic	Quebec	Ontario	Prairies	British Columbia
Prairies	171	1,757	5,112	9,432	1,254
British Columbia	86	829	2,338	1,006	5,832
Exports	2,282	7,369	17,332	1,477	5,965
Unallocated	253	1,922	3,726	750	774
<b>Total</b>	<b>7,423</b>	<b>39,117</b>	<b>76,220</b>	<b>14,744</b>	<b>14,628</b>
Percentage of value of shipments					
Atlantic	47.9	18.1	30.6	2.1	1.3
Quebec	2.2	66.3	27.5	3.1	0.8
Ontario	1.4	14.4	81.0	2.2	1.0
Prairies	1.0	9.9	28.8	53.2	7.1
British Columbia	0.8	8.2	23.2	10.0	57.8
Exports	6.6	21.4	50.3	4.3	17.3
Unallocated	3.4	25.9	50.2	10.1	10.4
<b>Total</b>	<b>4.9</b>	<b>25.7</b>	<b>50.1</b>	<b>9.7</b>	<b>9.6</b>

<sup>1</sup>This survey is conducted every five years.

### 16.12 Number of employees by industry group and province, 1981 and 1982

Industry group	Province or territory					
	Nfld.	PEI	NS	NB	Que.	Ont.
<b>1981</b>						
Food and beverage industries	11,082	2,048	11,798	9,792	58,666	87,799
Tobacco products industries	1	—	1	1	4,573	3,673
Rubber and plastics products industries	1	1	1	150	14,127	38,073
Leather industries	1	1	1	1	10,867	13,815
Textile industries	1	1	1,461	273	32,122	30,764
Knitting mills	—	1	1	—	11,562	7,174
Clothing industries	—	1	160	301	56,922	25,644
Wood industries	334	128	1,802	3,956	27,976	20,970
Furniture and fixture industries	1	17	349	654	17,921	27,431
Paper and allied industries	1	—	3,340	1	45,011	47,381
Printing, publishing and allied industries	595	1	1,521	1,270	26,173	54,792
Primary metal industries	1	—	1	1	30,884	72,285
Metal fabricating industries (except machinery and transportation equipment industries)	323	169	1,606	1,296	37,622	89,176
Machinery industries (except electrical machinery)	1	1	601	795	20,913	63,979
Transportation equipment industries	1,091	90	4,633	2,252	39,318	111,740
Electrical products industries	1	1	1,352	1	30,520	85,487
Non-metallic mineral products industries	446	1	747	1	13,126	25,485
Petroleum and coal products industries	1	—	1	1	4,087	12,842
Chemical and chemical products industries	610	1	1,047	1	26,444	51,851
Miscellaneous manufacturing industries	187	1	360	792	17,005	41,699
<b>All manufacturing industries</b>	<b>18,210</b>	<b>3,041</b>	<b>38,807</b>	<b>31,511</b>	<b>525,839</b>	<b>912,060</b>
	Man.	Sask.	Alta.	BC	YT and NWT	Canada
<b>1982</b>						
Food and beverage industries	10,509	5,304	16,713	20,316	51	234,078
Tobacco products industries	1	1	1	1	—	8,744
Rubber and plastics products industries	999	219	1	1,892	—	61,504
Leather industries	1	1	301	1	—	26,207
Textile industries	716	93	916	1,233	1	67,673
Knitting mills	1	—	1	1	—	20,495
Clothing industries	7,058	601	1,979	3,111	1	95,850
Wood industries	2,158	1,620	6,904	46,627	95	112,570

## 16.12 Number of employees by industry group and province, 1981 and 1982 (continued)

Industry group	Province or territory					
Furniture and fixture industries	2,179	127	2,241	2,378	1	53,361
Paper and allied industries	2,361	1		20,660	—	131,024
Printing, publishing and allied industries	4,161	2,177	7,863	8,643	1	107,488
Primary metal industries	2,688	1	1	9,828	—	125,168
Metal fabricating industries (except machinery and transportation equipment industries)	5,080	1,763	10,494	11,303	—	158,832
Machinery industries (except electrical machinery)	5,513	2,448	7,402	6,769	—	108,531
Transportation equipment industries	6,387	775	3,188	9,138	—	178,612
Electrical products industries	2,380	990	2,635	3,845	—	127,924
Non-metallic mineral products industries	1,374	1,299	6,749	4,859	1	55,269
Petroleum and coal products industries	1	1	1	1,699	1	22,638
Chemical and chemical products industries	1,085	385	5,553	2,999	1	90,427
Miscellaneous manufacturing industries	1,272	703	2,423	3,032	1	67,573
All manufacturing industries	57,177	21,479	86,356	159,114	374	1,853,968
1982	Nfld.	PEI	NS	NB	Que.	Ont.
Food and beverage industries	10,115	1	11,850	10,078	55,875	86,919
Tobacco products industries	1	—	1	65	4,490	3,738
Rubber and plastics products industries	1	1	1	211	13,030	35,465
Leather industries	1	1	1	1	9,727	11,808
Textile industries	1	1	1,160	291	27,721	27,274
Knitting mills	—	1	1	—	9,971	6,927
Clothing industries	—	—	171	1	54,441	24,939
Wood industries	263	112	1,617	3,163	23,608	19,015
Furniture and fixture industries	1	1	243	343	15,267	25,189
Paper and allied industries	1	—	2,918	5,524	43,144	43,917
Printing, publishing and allied industries	1	1	1,567	1,166	25,678	54,063
Primary metal industries	—	—	1	1	27,609	66,770
Metal fabricating industries (except machinery and transportation equipment industries)	404	1	1,408	1,159	33,513	79,246
Machinery industries (except electrical machinery)	1	1	394	713	18,606	56,674
Transportation equipment industries	1,005	1	2,853	1,665	35,235	103,352
Electrical products industries	1	1	1,001	1	29,172	77,368
Non-metallic mineral products industries	387	1	735	1	11,477	22,574
Petroleum and coal products industries	1	—	1	1	4,034	12,057
Chemical and chemical products industries	1	1	1,105	1	24,737	51,396
Miscellaneous manufacturing industries	179	1	349	787	15,002	39,712
All manufacturing industries	16,873	2,872	34,646	28,619	482,337	848,403
	Man.	Sask.	Alta.	BC	YT and NWT	Canada
Food and beverage industries	10,160	5,355	16,288	18,355	1	226,946
Tobacco products industries	108	1	101	138	—	8,711
Rubber and plastics products industries	1	142	1,532	1,680	—	57,076
Leather industries	586	48	1	1	—	22,957
Textile industries	1	1	943	1,192	1	59,416
Knitting mills	1	—	1	1	—	18,318
Clothing industries	6,468	459	1,705	2,797	1	91,306
Wood industries	1,867	1,399	5,791	40,230	60	97,125
Furniture and fixture industries	1,921	124	1,919	2,225	—	47,289
Paper and allied industries	2,300	1	2,511	18,875	—	122,763
Printing, publishing and allied industries	4,077	2,275	8,029	8,910	1	106,588
Primary metal industries	2,278	1	3,917	8,379	—	113,215
Metal fabricating industries (except machinery and transportation equipment industries)	4,554	1,588	9,981	9,578	1	141,563
Machinery industries (except electrical machinery)	4,898	2,240	6,492	5,785	—	95,909
Transportation equipment industries	6,355	538	2,240	7,739	1	161,086
Electrical products industries	2,659	908	2,347	3,405	—	117,377

**16.12 Number of employees by industry group and province, 1981 and 1982 (concluded)**

Industry group	Province or territory					
Non-metallic mineral products industries	1,071	990	5,422	4,300	1	47,949
Petroleum and coal products industries	1	1	2,365	1,234	1	21,501
Chemical and chemical products industries	1,149	392	5,231	2,948	1	88,036
Miscellaneous manufacturing industries	1,349	761	2,500	2,924	1	63,719
All manufacturing industries	53,738	20,115	79,701	141,193	353	1,708,850

<sup>1</sup>Confidential.**16.13 Value of shipments of goods of own manufacture by industry group and province, 1981 and 1982 (million dollars)**

Industry group	Province or territory					
1981	Nfld.	PEI	NS	NB	Que.	Ont.
Food and beverage industries	551.7	186.7	951.5	863.5	8,310.2	12,504.0
Tobacco products industries	—	—	—	—	606.1	768.7
Rubber and plastics products industries	1	1	1	10.9	1,020.6	2,850.7
Leather industries	1	1	1	1	468.8	666.7
Textile industries	1	1	90.1	15.3	2,392.4	2,339.0
Knitting mills	—	1	1	—	650.9	292.8
Clothing industries	—	1	5.2	5.2	2,512.3	1,056.4
Wood industries	21.5	6.2	92.7	250.9	1,740.9	1,436.1
Furniture and fixture industries	1	0.5	13.1	21.0	842.9	1,518.2
Paper and allied industries	1	—	428.0	1	5,199.9	5,129.8
Printing, publishing and allied industries	28.3	1	75.5	51.1	1,841.4	3,169.4
Primary metal industries	1	—	1	1	3,618.1	8,529.8
Metal fabricating industries (except machinery and transportation equipment industries)	23.8	7.9	115.4	79.3	3,079.3	6,800.7
Machinery industries (except electrical machinery)	1	1	15.7	31.9	1,466.2	5,346.5
Transportation equipment industries	54.4	4.6	402.0	124.8	3,862.2	15,780.8
Electrical products industries	1	—	55.7	—	2,176.8	5,997.5
Non-metallic mineral products industries	31.5	1	64.9	1	1,005.8	2,070.9
Petroleum and coal products industries	1	—	1	1	5,418.0	7,199.6
Chemical and chemical products industries	66.6	1	141.0	1	3,015.1	7,741.6
Miscellaneous manufacturing industries	4.6	1	13.9	31.5	911.2	2,790.3
All manufacturing industries	1,241.3	247.0	3,822.6	3,844.2	50,139.1	93,989.5
	Man.	Sask.	Alta.	BC	YT and NWT	Canada
Food and beverage industries	1,443.0	871.7	3,594.7	2,485.5	3.4	31,765.9
Tobacco products industries	—	—	—	—	—	1,374.8
Rubber and plastics products industries	73.5	12.6	1	129.4	—	4,513.2
Leather industries	1	—	18.7	1	—	1,218.8
Textile industries	39.2	5.7	106.6	59.4	1	5,051.8
Knitting mills	1	—	1	1	—	1,012.3
Clothing industries	279.3	25.3	90.5	114.1	1	4,090.2
Wood industries	130.9	106.2	510.8	4,137.8	2.9	8,436.9
Furniture and fixture industries	113.9	4.7	124.3	132.6	1	2,772.8
Paper and allied industries	295.2	1	1	2,898.4	—	15,729.4
Printing, publishing and allied industries	231.9	102.9	454.6	495.7	—	6,463.6
Primary metal industries	229.1	1	1	885.8	1	14,449.5
Metal fabricating industries (except machinery and transportation equipment industries)	404.8	108.1	810.2	946.2	—	12,375.7
Machinery industries (except electrical machinery)	486.9	188.4	693.1	454.1	—	8,689.0
Transportation equipment industries	379.4	42.0	199.3	831.8	—	21,681.3
Electrical products industries	203.7	60.9	177.1	221.7	—	8,938.4
Non-metallic mineral products industries	137.9	135.2	721.4	505.2	1	4,769.3

### 16.13 Value of shipments of goods of own manufacture by industry group and province, 1981 and 1982 (million dollars) (concluded)

Industry group	Province or territory					
Petroleum and coal products industries	1	1	1	1,857.9	1	20,453.3
Chemical and chemical products industries	111.6	53.7	1,472.4	489.5	1	13,189.5
Miscellaneous manufacturing industries	47.1	27.1	103.8	121.7	1	4,054.0
All manufacturing industries	4,977.0	2,503.6	13,437.1	16,793.4	34.9	191,029.7
1982	Nfld.	PEI	NS	NB	Que.	Ont.
Food and beverage industries	593.4	1	969.9	964.4	8,828.2	12,912.5
Tobacco products industries	—	—	—	—	679.3	814.5
Rubber and plastics products industries	1	1	1	19.4	995.4	2,758.4
Leather industries	1	1	1	1	433.7	597.7
Textile industries	1	1	81.4	21.9	2,046.2	2,149.7
Knitting mills	—	1	1	—	587.6	294.2
Clothing industries	—	—	6.1	1	2,464.6	1,016.4
Wood industries	16.8	4.6	78.6	183.7	1,514.7	1,256.4
Furniture and fixture industries	1	1	10.9	15.8	732.3	1,404.9
Paper and allied industries	1	—	344.5	704.1	5,023.4	4,841.1
Printing, publishing and allied industries	1	1	79.5	50.2	1,909.3	3,360.0
Primary metal industries	—	—	1	1	3,396.2	7,070.9
Metal fabricating industries (except machinery and transportation equipment industries)	34.3	1	99.2	81.7	3,091.8	6,409.8
Machinery industries (except electrical machinery)	1	1	12.3	28.2	1,363.9	4,710.6
Transportation equipment industries	63.4	1	273.2	83.6	3,376.1	17,707.3
Electrical products industries	1	1	42.4	1	2,220.6	5,717.1
Non-metallic mineral products industries	25.5	1	62.5	1	938.8	1,905.7
Petroleum and coal products industries	1	—	1	1	5,570.9	7,804.4
Chemical and chemical products industries	1	1	134.8	1	3,175.1	8,472.1
Miscellaneous manufacturing industries	4.7	1	14.7	29.9	831.3	2,735.6
All manufacturing industries	1,288.5	255.2	3,610.7	3,323.7	49,179.4	93,939.3
	Man.	Sask.	Alta.	BC	YT and NWT	Canada
Food and beverage industries	1,517.9	889.2	3,570.5	2,484.6	1	32,930.1
Tobacco products industries	—	—	—	—	—	1,493.8
Rubber and plastics products industries	1	10.6	139.1	122.6	—	4,433.6
Leather industries	33.9	2.9	1	1	—	1,106.0
Textile industries	1	1	103.6	61.9	1	4,507.6
Knitting mills	1	—	1	1	—	947.8
Clothing industries	270.2	19.8	74.8	104.2	1	3,962.3
Wood industries	113.3	81.6	415.2	3,505.8	2.3	7,173.0
Furniture and fixture industries	102.8	4.7	103.0	118.1	—	2,494.1
Paper and allied industries	288.0	1	423.9	2,702.3	—	14,784.0
Printing, publishing and allied industries	246.9	111.4	473.5	506.7	—	6,779.3
Primary metal industries	178.4	1	617.3	794.6	1	12,402.4
Metal fabricating industries (except machinery and transportation equipment industries)	318.2	106.8	818.7	797.8	1	11,765.7
Machinery industries (except electrical machinery)	359.7	167.8	639.1	374.8	—	7,662.2
Transportation equipment industries	394.7	32.4	138.1	582.1	1	22,656.6
Electrical products industries	251.0	73.3	162.3	219.8	—	8,714.4
Non-metallic mineral products industries	103.0	102.7	675.0	468.2	1	4,385.3
Petroleum and coal products industries	1	1	3,346.0	2,248.4	1	21,709.1
Chemical and chemical products industries	134.2	86.9	1,451.5	447.6	1	14,095.4
Miscellaneous manufacturing industries	49.6	25.7	107.5	128.0	1	3,930.2
All manufacturing industries	4,839.5	2,488.1	13,278.3	15,689.8	40.4	187,932.9

<sup>1</sup>Confidential.

# 16.14 Summary of manufacturing industries, by census metropolitan area, 1980 and 1981

Census metropolitan area	Estab- lish- ments No.	Employees		Costs \$'000,000		Total value added \$'000,000	Value of shipments of goods of own manufacture \$'000,000
		Number	Salaries and wages \$'000,000	Fuel and electricity	Materials and supplies used		
1980							
Calgary, Alta.	743	24,371	447.4	34.7	1,695.3	944.2	2,590.8
Chicoutimi-Jonquière, Que.	104	10,593	243.6	42.0	588.4	636.5	1,231.6
Edmonton, Alta.	825	31,191	617.6	100.7	3,509.8	1,430.9	4,871.2
Halifax, NS	186	6,741	110.8	11.8	895.9	253.3	1,151.3
Hamilton, Ont.	753	70,895	1,405.6	204.0	4,162.1	3,004.5	7,301.5
Kitchener, Ont.	676	50,264	811.5	49.4	1,847.0	1,622.6	3,424.7
London, Ont.	380	23,045	403.3	21.1	914.9	950.2	1,778.1
Montréal, Que.	5,689	268,078	4,433.2	351.5	13,745.2	10,086.6	23,203.7
Ottawa-Hull, Ont., Que.	385	18,952	338.0	55.8	1,643.4	713.7	2,356.8
Québec, Que.	573	20,920	350.3	43.3	1,171.2	889.6	2,054.4
Regina, Sask.	148	6,186	118.8	18.3	459.2	266.7	715.3
Saint John, NB	75	6,820	133.0	51.2	1,416.4	373.8	1,786.0
St. Catharines-Niagara, Ont.	391	37,066	764.8	127.2	1,797.4	1,489.7	3,355.8
St. John's, Nfld.	91	3,330	55.9	5.3	114.2	107.4	221.4
Saskatoon, Sask.	185	5,892	95.1	9.7	351.6	226.1	571.4
Sudbury, Ont.	78	8,121	163.9	82.2	99.5	245.0	423.2
Thunder Bay, Ont.	100	7,819	154.3	58.8	420.4	419.3	893.7
Toronto, Ont.	7,010	349,591	5,953.0	365.7	17,373.8	13,188.6	29,492.4
Vancouver, BC	2,190	74,514	1,525.1	114.2	4,618.3	3,027.2	7,567.4
Victoria, BC	218	5,507	112.7	3.9	183.9	191.3	372.7
Windsor, Ont.	448	28,050	575.8	43.7	1,736.7	1,125.4	2,858.0
Winnipeg, Man.	909	45,273	693.9	56.6	1,998.9	1,456.3	3,383.5
1981							
Calgary, Alta.	763	25,640	540.4	44.1	2,033.1	1,239.2	3,157.4
Chicoutimi-Jonquière, Que.	104	11,825	306.2	68.2	675.0	555.6	1,220.8
Edmonton, Alta.	844	33,051	731.7	143.0	4,666.4	1,927.5	6,534.9
Halifax, NS	193	6,798	124.8	12.7	1,157.3	329.5	1,436.5
Hamilton, Ont.	765	67,045	1,475.5	227.8	4,325.0	3,090.9	7,583.6
Kitchener, Ont.	692	49,731	886.8	56.9	2,085.1	1,824.5	3,860.0
London, Ont.	377	22,775	447.6	26.6	983.0	1,004.0	1,887.5
Montréal, Que.	5,772	264,531	4,907.8	437.8	16,112.6	11,500.1	27,199.5
Ottawa-Hull, Ont., Que.	412	18,978	392.4	61.3	1,298.0	889.6	2,134.6
Québec, Que.	564	20,903	392.8	49.3	1,452.5	1,000.8	2,319.7
Regina, Sask.	150	6,192	130.1	24.2	637.6	285.0	929.3
Saint John, NB	75	6,819	148.6	58.5	1,642.6	357.2	2,035.2
St. Catharines-Niagara, Ont.	409	38,302	893.4	148.6	2,117.1	1,732.5	3,935.4
St. John's, Nfld.	97	3,606	65.2	6.3	129.2	122.2	250.7
Saskatoon, Sask.	182	6,252	114.0	13.1	415.4	236.3	658.3
Sudbury, Ont.	86	8,345	183.6	92.7	108.2	279.3	475.2
Thunder Bay, Ont.	101	7,982	180.2	73.0	478.3	459.0	993.8
Toronto, Ont.	7,072	350,554	6,615.4	428.3	19,589.7	15,065.3	33,679.0
Vancouver, BC	2,183	75,019	1,717.3	143.3	5,315.3	3,387.7	8,581.6
Victoria, BC	231	5,446	126.6	4.6	194.5	240.4	432.1
Windsor, Ont.	461	29,415	679.2	57.1	2,205.5	1,244.7	3,418.6
Winnipeg, Man.	893	44,136	763.3	64.7	2,203.1	1,675.5	3,853.3

### 16.15 Percentages of value of shipments of goods and own manufacture accounted for by the four leading enterprises in the 40 leading industries of Canada, ranked by 1980 shipments

Industry	Enter- prises No.	Estab- lish ments No.	Value of shipments of goods of own manufacture \$'000,000	Percentage of shipments accounted for by the four leading enterprises				
				1972	1974	1976	1978	1980
Petroleum refining	16	41	14,256	73.7	67.8	68.1	63.9	61.7
Pulp and paper mills	60	144	10,908	34.5	34.0	33.0	35.0	30.9
Motor vehicle manufacturers	15	22	10,071	1	90.1	93.4	93.6	93.7
Slaughtering and meat processors	490	547	6,944	54.0	50.2	49.5	44.0	43.3
Iron and steel mills	39	55	6,431	77.8	76.8	81.5	79.2	77.9
Sawmills and planing mills	1,180	1,317	5,278	18.2	18.8	19.4	20.2	19.2
Miscellaneous machinery and equipment manufacturers	1,176	1,260	5,028	12.5	12.7	11.0	8.9	8.3
Dairy products industry	283	456	4,309	33.0	37.3	37.3	35.2	37.0
Motor vehicle parts and accessories	278	342	3,610	48.9	46.2	50.5	54.5	44.6
Metal stamping and pressing industry	633	704	3,507	39.5	37.0	37.0	37.0	54.1
Smelting and refining	17	32	3,273	78.7	75.0	71.2	76.0	72.0
Miscellaneous food processors, n.e.s.	246	312	2,877	35.2	39.5	37.8	35.0	33.8
Commercial printing	2,388	2,488	2,675	19.5	20.9	21.1	18.8	18.2
Industrial chemicals (organic), n.e.s.	26	37	2,643	59.9	61.6	61.0	62.9	64.2
Communications equipment manufacturers	369	411	2,329	56.5	60.8	63.9	55.9	52.4
Aircraft and aircraft parts manufacturers	154	162	2,304	1	1	65.2	72.4	75.0
Feed industry	493	609	2,281	29.1	27.4	27.2	27.7	25.7
Plastics fabricating industry, n.e.s.	784	873	2,182	13.3	11.3	11.1	10.6	10.1
Rubber products industries	112	134	1,911	60.7	51.4	57.3	56.9	56.6
Industrial chemicals (inorganic), n.e.s.	39	97	1,856	52.4	44.7	46.3	38.7	41.2
Publishing and printing	510	619	1,740	42.5	48.7	48.2	47.7	57.1
Manufacturers of electrical industrial equipment	186	253	1,583	51.1	50.7	51.4	47.5	46.8
Miscellaneous metal fabricating industries	609	634	1,534	15.1	13.4	13.7	13.3	12.0
Men's clothing factories	440	483	1,513	11.7	12.7	12.0	17.1	20.6
Miscellaneous chemical industries, n.e.s.	282	369	1,508	32.3	33.2	32.2	31.9	28.4
Fish products industry	283	376	1,465	42.5	44.5	49.0	46.3	44.7
Agricultural implement industry	198	206	1,393	65.3	1	65.1	66.0	61.9
Manufacturers of plastics and synthetic resins	48	64	1,372	57.0	56.3	52.8	59.2	57.3
Miscellaneous paper converters	208	272	1,351	33.5	34.2	32.8	31.0	28.5
Women's clothing factories	533	571	1,339	8.2	7.5	7.3	6.3	6.4
Fabricated structural metal industry	185	209	1,213	38.0	43.9	41.8	41.2	38.2
Fruit and vegetable canners and preservers	155	199	1,206	39.8	37.3	39.3	39.0	39.0
Breweries	8	41	1,206	96.6	1	1	98.9	99.0
Bakeries	1,424	1,487	1,189	33.5	37.0	31.9	32.4	33.5
Manufacturers of electric wire and cable	17	48	1,178	79.2	80.2	81.4	80.3	80.2
Household furniture manufacturers, n.e.s.	873	901	1,164	13.4	15.4	17.0	15.6	17.6
Wire and wire products manufacturers, n.e.s.	248	281	1,149	—	—	38.7	43.2	41.3
Manufacturers of pharmaceuticals and medicines	119	138	1,144	27.8	25.6	27.5	27.0	27.1
Shipbuilding and repair	60	69	1,076	63.7	66.5	62.7	54.0	56.4
Soft drink manufacturers	190	238	1,072	46.2	50.4	50.5	49.6	48.2

<sup>1</sup>Confidential.

**16.16 Capacity utilization rates, by quarter 1961-84**

Year and quarters	Manufacturing industries			Year and quarters	Manufacturing industries		
	Durable goods	Non-durable goods	Total		Durable goods	Non-durable goods	Total
1961 1st	63.0	81.4	72.1	1973 1st	89.2	91.9	90.5
2nd	64.9	81.9	73.3	2nd	88.1	91.9	90.0
3rd	66.1	83.5	74.7	3rd	89.1	91.2	90.1
4th	67.8	84.1	75.8	4th	89.4	93.1	91.2
1962 1st	68.8	84.3	76.4	1974 1st	92.0	93.5	92.8
2nd	71.5	85.2	78.2	2nd	89.5	91.7	90.6
3rd	72.8	85.3	79.0	3rd	88.0	89.0	88.5
4th	73.4	84.3	78.8	4th	85.7	86.4	86.1
1963 1st	73.8	84.8	79.2	1975 1st	79.0	83.7	81.3
2nd	75.0	85.9	80.4	2nd	78.4	82.2	80.2
3rd	75.1	86.1	80.5	3rd	79.1	81.0	80.0
4th	78.5	86.8	82.6	4th	79.7	81.2	80.4
1964 1st	80.8	88.6	84.6	1976 1st	80.3	83.4	81.8
2nd	80.7	88.7	84.6	2nd	80.9	86.8	83.8
3rd	81.2	88.5	84.8	3rd	79.6	86.2	82.9
4th	82.7	89.4	86.0	4th	78.3	84.4	81.3
1965 1st	85.2	88.4	86.8	1977 1st	80.4	84.4	82.4
2nd	86.5	87.8	87.1	2nd	79.2	84.0	81.6
3rd	86.2	88.8	87.5	3rd	78.7	83.1	80.9
4th	89.5	89.6	89.6	4th	78.2	83.1	80.6
1966 1st	89.7	90.2	89.9	1978 1st	77.1	84.3	80.7
2nd	87.8	89.6	88.7	2nd	80.1	84.9	82.5
3rd	85.6	88.5	87.1	3rd	80.6	85.9	83.2
4th	85.8	88.1	87.0	4th	83.2	88.1	85.6
1967 1st	83.9	87.2	85.5	1979 1st	85.2	87.9	86.5
2nd	82.5	86.6	84.5	2nd	83.2	88.5	85.8
3rd	82.2	87.1	84.6	3rd	82.9	88.4	85.6
4th	81.7	86.1	83.8	4th	81.0	88.1	84.5
1968 1st	79.5	86.8	83.1	1980 1st	79.6	88.3	83.9
2nd	82.9	86.8	84.8	2nd	73.4	86.1	79.7
3rd	84.6	85.6	85.1	3rd	73.4	85.1	79.2
4th	86.1	87.7	86.9	4th	75.2	85.3	80.2
1969 1st	86.6	88.8	87.7	1981 1st	74.9	85.9	80.3
2nd	86.6	88.6	87.6	2nd	76.9	86.3	81.5
3rd	84.7	89.1	86.9	3rd	72.5	84.1	78.2
4th	83.2	88.0	85.6	4th	67.2	81.4	74.2
1970 1st	82.5	87.5	85.0	1982 1st	63.0	77.5	70.2
2nd	78.9	85.7	82.2	2nd	60.8	75.0	67.8
3rd	77.5	84.5	80.9	3rd	58.9	74.3	66.5
4th	74.2	85.4	79.7	4th	54.0	73.3	63.5
1971 1st	77.0	84.5	80.7	1983 1st	58.2	76.0	67.0
2nd	78.5	85.0	81.7	2nd	59.9	76.7	68.2
3rd	80.2	86.8	83.5	3rd	63.1	78.2	70.6
4th	81.0	87.4	84.1	4th	66.4	78.7	72.5
1972 1st	79.3	87.3	83.2	1984 1st	67.0	77.4	72.1
2nd	80.7	89.3	84.9	2nd	65.5	79.3	72.3
3rd	81.7	89.9	85.7				
4th	84.7	91.1	87.9				

**Sources**

16.1, 16.2 Manufacturing and Primary Industries Division (MAPID), Statistics Canada.

16.3 Business Finance Division, Statistics Canada.

16.4 - 16.9 MAPID.

16.10 External Trade Division, Statistics Canada.

16.11 - 16.15 MAPID.

16.16 Construction Division, Statistics Canada.

CHAPTER 17

---

# MERCHANDISING AND SERVICES



## UPDATE

---

In 1983 total retail sales in Canada rose to \$106.2 billion, 8.8% over 1982. But in 1982, with interest rates and unemployment at high levels, consumers were reluctant to spend, retail sales were up only 3.5% over 1981, and the average spending for the year in purchases of goods per person was \$4,052.

Retail sales of new motor vehicles constitute a leading economic indicator, being one of the largest components of personal spending for consumer goods and services. In 1982 consumer wariness was reflected in an accentuated decline in the number of sales and a drop of 17.6% in value from \$11.9 billion in 1981 to \$9.8 billion. In 1983, however, new motor vehicle sales showed a strong recovery, going up in value to \$12.2 billion.

Data on merchandising and service industries are gathered by Statistics Canada through monthly, annual and occasional surveys to produce a variety of statistical information, particularly for market analysts and entrepreneurs.

## CHAPTER 17

---

# MERCHANDISING AND SERVICES

<b>17.1</b>	<b>Retail trade</b>	<b>533</b>
17.1.1	Chain and independent stores	533
17.1.2	Department stores	534
17.1.3	New motor vehicle sales	534
17.1.4	Campus book stores	535
17.1.5	Non-store retailing	535
<b>17.2</b>	<b>Service trades</b>	<b>536</b>
17.2.1	Traveller accommodation	536
17.2.2	Food and beverage industry	537
17.2.3	Engineering and scientific services	537
17.2.4	Offices of architects	537
17.2.5	Computer services	537
17.2.6	Franchising	537
17.2.7	Charitable organizations	537
<b>17.3</b>	<b>Wholesale trade</b>	<b>537</b>
17.3.1	Wholesale merchants	539
17.3.2	Agents and brokers	539
17.3.3	Control and sale of alcoholic beverages	539
<b>17.4</b>	<b>Co-operatives</b>	<b>539</b>
17.4.1	Financial structure	540
17.4.2	Product marketings	540
17.4.3	Sales of supplies	540
<b>17.5</b>	<b>Tourism</b>	<b>541</b>
<b>17.6</b>	<b>Consumer affairs legislation</b>	<b>541</b>
<b>17.7</b>	<b>Government aid to business</b>	<b>543</b>

## TABLES

17.1-17.4	Retail trade — chain, independent and department stores	545
17.5, 17.6	Sales of new motor vehicles	548
17.7	Sales in campus book stores	548
17.8, 17.9	Vending machines, operators and sales	549
17.10, 17.11	Direct sales	550
17.12, 17.13	Traveller accommodation	551
17.14	Restaurant receipts	553
17.15, 17.16	Wholesale merchant sales	554
17.17, 17.18	Agents and brokers	554
17.19, 17.20	Marketing and purchasing co-operatives	555
17.21, 17.22	Sales of alcoholic beverages	557
17.23	Franchising in Canada	558
17.24	Computer services	558

## CHARTS

Chart 17.1	Retail sales of new motor vehicles	535
Chart 17.2	Computer services in Canada	538

## MERCHANDISING AND SERVICES

Distribution of goods and services from producer to consumer, principally through wholesale and retail channels and service businesses is generally known as the marketing process.

Merchandising industries include those businesses providing wholesale and retail functions. Wholesaling exists in a variety of forms: wholesale merchants, agents and brokers, primary products dealers, manufacturers sales branches, petroleum bulk tank plants and truck distributors. Retailing encompasses all sales activities related to transmitting goods to consumers for household or personal use, both through traditional store locations and such facilities as direct selling and machine vending. Services cover those firms primarily engaged in providing a wide range of recreational, personal and business services to individuals, businesses and government operations.

Statistics on merchandising and service industries are gathered by Statistics Canada through monthly, annual and occasional surveys to produce a variety of statistical information regarding the operations of these industries.

### 17.1 Retail trade

The retail trade sector includes those industries, according to the 1980 Standard Industrial Classification, whose establishments are primarily engaged in buying commodities for resale to the general public for personal or household consumption and in providing related services. Through the trade sector a vast array of products are marketed, bought and sold at the various levels of the domestic economy and finally reach the Canadian consumer on the retail market. The current measure of retail trade is, therefore, one of the key components used by economists and statisticians to estimate the consumption level of goods and final consumer demand, as shown in the national accounts and the many economic indicators derived from them. Retail trade statistics are collected by the merchandising and services division of Statistics Canada from monthly surveys of all retail chains (four or more stores in the same kind of business under one owner), and of a sample of independent retailers based on the retail location concept.

Table 17.1 shows retail trade by kind of business (a refinement of the 1971 Standard Industrial

Classification) and by province from 1979 to 1982, and indicates percentage changes in sales for 1982 over 1981 and the percentage distribution of sales by kind of business for 1982. The results for 1982 clearly show the severity of the recession that hit the whole Canadian economy and thus considerably affected the behaviour of Canadian consumers. With interest rates and unemployment running at high levels, Canadian consumers remained reluctant to spend, and retail sales rose only 3.5% in 1982 over 1981, to a total of \$97.6 billion in current dollars from \$94.3 billion, as a result of the cautious mood that characterized Canadians in this period. Sales of durable goods in particular suffered from consumer reluctance to purchase big-ticket items. This is illustrated by the steep sales declines posted by motor vehicle dealers (-12.9%), household furniture stores (-11.4%) and used car dealers (-6.8%). The strongest increases in 1982 were recorded by pharmacies, patent medicine and cosmetics stores (21.3%), all other food stores (18.4%) and service stations (15.9%). All provinces except British Columbia, which reported a 1.9% decrease in retail sales, registered gains varying from 0.3% in Alberta to 7.5% in Newfoundland.

The three largest categories of retail sales in 1982 were combination stores (\$19.9 billion or 20.4% of total trade), motor vehicle dealers (\$14.4 billion or 14.8%) and all other stores (\$11.9 billion or 12.2%).

Because of its demographic predominance, Ontario remained the largest market in Canada with 36.4% of total retail sales in 1982, followed by Quebec (24.1%) and British Columbia (12.1%). But the largest amount of money spent on purchases of goods per capita was recorded in Alberta (\$4,889), followed by Yukon and Northwest Territories (\$4,337) and British Columbia (\$4,287). The average spending in purchases of goods per person in Canada was \$4,052 in 1982.

#### 17.1.1 Chain and independent stores

For the monthly retail trade survey a retail chain was defined as an organization operating four or more retail stores in the same kind of business under the same legal ownership. All department stores are classified as chains even if occasionally they do not meet exactly this definition. An independent retailer

is defined as one who operates one to three stores, even if he is a member of a voluntary group organization.

Table 17.2 provides data on the retail sales of chain and independent stores by kind of business in the years 1979-82 with percentage changes from year to year. For these years, chain stores played a dominant role in retailing in such kinds of business as combination (groceries and meat), department, general merchandise and variety stores. On the other hand, independent stores tend to predominate in other kinds of business such as grocery, confectionery and sundries stores, general stores, motor vehicle dealers, service stations, automotive parts and accessories stores, household furniture stores, pharmacies, patent medicine and cosmetics stores, florists, and sporting goods and accessories stores.

Independent stores were the largest segment of the retail trade in 1982, posting sales of \$54.9 billion or 56.2% of total trade while the market share held by the chain stores was 43.8% with sales of \$42.8 billion. Table 17.3 indicates that over a four-year period more than half of the 28 kinds of businesses have recorded a constant shift toward an increasing share of the market held by chain organizations. This was particularly accentuated in such groups as furniture, television, radio and appliance stores (up from 19.4% in 1979 to 33.1% in 1982) and grocery, confectionery and sundries stores (up from 19.0% in 1979 to 27.1% in 1982).

### 17.1.2 Department stores

Department stores are known as general merchandise stores carrying different lines of commodities such as wearing apparel, furniture, appliances and home furnishings and could also include hardware, toiletries, cosmetics, photographic equipment, jewellery, toys and sporting goods, with no one merchandise line representing more than 50% of the total revenue. Within the retail location the goods are usually displayed to customers by arranging them in distinct departments and the accounting is done on a departmental basis.

Table 17.4 shows data on department stores for 1979-82. With retail sales of \$10.2 billion in 1982, department stores alone represent 10.5% of the total retail activity, the fourth biggest component of the retail trade after combination stores (20.4%), motor vehicle dealers (14.8%) and the all other stores group (12.2%). Facing strong competition by other chain stores eager to maintain or increase their market share during the precarious economic conditions that prevailed in 1982, department store organizations had declines in both their market share (down from 10.8% in 1981) and sales level (down \$10 million from 1981). Junior department stores, defined as retailing entities selling the same wide range of goods sold in the more traditional major department stores but popularly described as discount operations, had

sales of \$3.6 billion, up 3.1% from 1981. Major department store organizations recorded total sales of \$6.6 billion, down 1.8% from 1981.

At the department level, 21 of the 40 departments covered by the Statistics Canada survey recorded lower sales than in 1981, with the largest decreases in furniture (-15.1%), major appliances (-12.0%) and piece goods (-9.2%). Major gains were reported in millinery (10.5%), women's and girls' hosiery (10.4%) and in toiletries, cosmetics and drugs (7.9%).

In the 1970s the rate of concentration in this kind of business had accelerated with the number of department store organizations shrinking due to closure or amalgamation. This tendency seems to have stopped in 1982 when 25 firms were counted as department store organizations, the same number as in 1981. But the organizations continued a geographical expansion in an effort to reach more customers and the number of retail locations rose from 787 stores at the end of 1981 to 803 in December 1982, an increase of 16 stores.

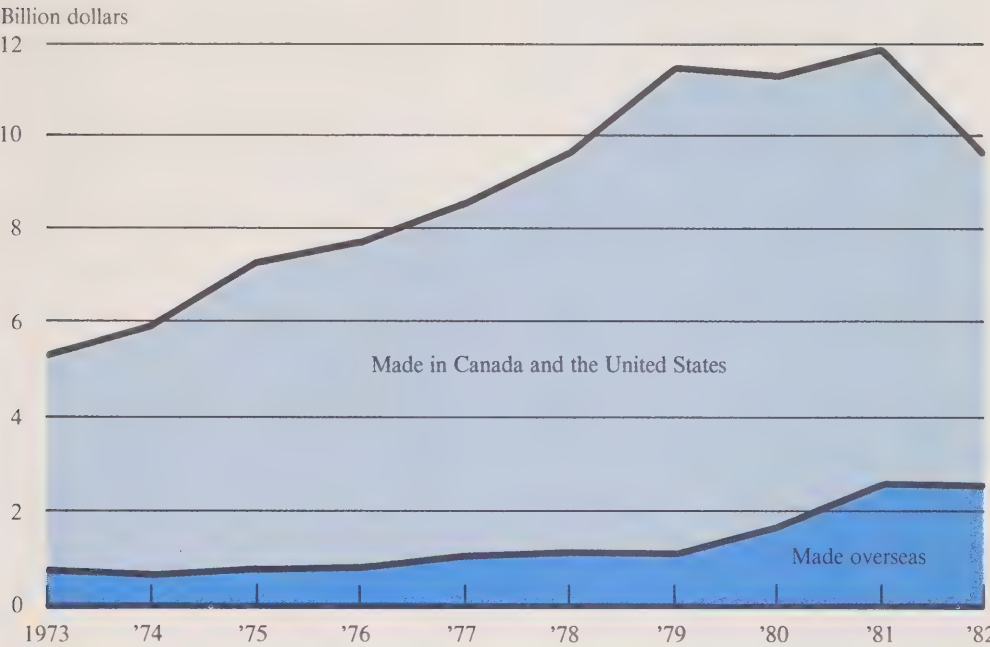
Of the 25 department store organizations surveyed, 19 were considered major department store organizations in 1982, operating a total of 343 stores. Six firms were considered junior department store organizations and operated in 460 locations.

### 17.1.3 New motor vehicle sales

Because of the tremendous importance of the automobile industry in Canada, retail sales of new cars in Canada constitute one of the leading economic indicators of the health of the national economy, accounting for one of the largest components of total personal spending for consumer goods and services in the gross national product. Consumer wariness in 1982 about the economy, when interest rates reached a summit, was largely reflected in the sales figures of such price-sensitive commodities as new cars. Table 17.5 shows that the constant decline from 1979, recorded in new motor vehicle sales in terms of units, was accentuated in 1982 with total sales dropping by 22.7% from 1,190,882 units sold in 1981 to 920,902 units in 1982. For the first time in a 10-year period, dollar sales fell 17.6% from \$11.9 billion in 1981 to \$9.8 billion in 1982. Commercial vehicles were the category most affected by the recession when sales dropped by 27.6% from 1981 to 207,421 units. Passenger cars sales decreased 21.1% to 713,481 units.

In this sector of the economy a major turnaround in consumer habits and attitudes was induced by the energy crisis (the two successive oil price shocks) in the 1970s and the unprecedented growth in world trade of automobiles. In a major transformation Canadian preferences shifted toward smaller, more fuel-efficient cars. In 1982, a total of 224,046 new passenger cars manufactured overseas were sold in Canada, accounting for 31.4% of the 713,481 units sold. This phenomenon was judged serious enough

Chart 17.1  
Retail sales of new motor vehicles in Canada



by the federal government to introduce import restrictions in April 1981 on Japanese manufactured vehicles to limit the number of models available and protect the Canadian industry.

Statistics on new motor vehicles are obtained by the merchandising and services division of Statistics Canada directly from Canadian manufacturers and from importers or distributors of strictly new vehicles, operating in Canada. These sources supply both the number of motor vehicles sold by their dealer network and the total retail value of sales. The unit data may differ from other data available, such as factory shipments and registrations, owing to variations in definition and treatment of new vehicles in relation to the different concepts used in each survey.

17.1.4 Campus book stores

Retail trade statistics are collected annually from more than 200 book stores on the campuses of universities and at other postsecondary educational institutions. Owing to their location and the highly seasonal nature of their business, campus book stores are not included in the census of merchandising and services, nor are they included in the monthly estimates of retail trade. Since they are not considered retail outlets, a separate survey is conducted. From 1979 to 1983 total retail sales of

campus book stores increased from \$116.3 million to \$185.3 million, a jump of 59.3%. In the 1982-83 academic year, of the total sales of \$185.3 million, 66.3% or \$122.9 million was accounted for by textbooks, \$16.6 million or 9.0% by other books, 29.6% by stationery and supplies and \$19.0 million (10.2%) by sales of miscellaneous items.

17.1.5 Non-store retailing

Consumer goods, in addition to being sold in retail stores, often reach the household consumer through other channels. These channels bypass the retail outlet completely in moving from primary producer, manufacturer, importer, wholesaler or specialized direct seller, to the household consumer. Statistics Canada conducts annual surveys of two distinct forms of non-store retailing: merchandise sales through vending machines and sales by manufacturers and distributors specializing in direct-sales methods such as catalogue and mail-order sales, door-to-door canvassing, and house parties.

**Vending machine sales.** This survey is designed to measure the value of merchandise sales made through automatic vending machines owned and operated by independent operators and subsidiaries or divisions of manufacturers and wholesalers of vendable products. Excluded from coverage are the sales through many thousands of vending machines

(carrying such commodities as cigarettes, beverages, confectionery) which are owned and operated by retail stores, restaurants and service stations; these sales statistics are usually inextricable from data collected in the course of other surveys.

During 1982, the 701 operators of 122,598 vending machines covered by this survey reported sales of \$363.3 million (Table 17.8). These sales, excluding ovens and coin and bill changers, represent a decrease of 4.4% from the \$380.1 million recorded in the previous year. Decreased sales through the following principal types of machine were chiefly responsible for the decline in receipts between 1981 and 1982: cigarette machines, with sales down 4.7% to \$135.6 million; coffee machines, sales down 6.6% to \$65.0 million; packaged confectionery, pastry and snack food machines, sales down 0.6% to \$48.9 million; fresh food combination machines, sales down 12.6% to \$20.4 million; and packaged milk and juice machines together with machines dispensing other beverages showing decreased sales of 13.9% which totalled \$18.6 million. However, sales from soft drink machines reached \$65.9 million, a 4.3% increase over the \$63.2 million recorded in 1981.

**Direct selling** refers to the substantial volume of consumer goods sold to the household consumer for his personal use by other than the regular retail store outlet, department store, chain store or independent retail dealer. This occurs at all levels in the movement of goods from the primary producer or importer to the consumer: at the agricultural level by greenhouse and nursery operators and some market gardeners; at the manufacturing stage through sales exclusively to employees at company-operated on-premise stores, or through integrated sales divisions using mail-order or door-to-door canvassers; by some wholesalers and importers; and by specialized direct sellers.

During 1981, Canadian householders spent \$2.7 billion on a wide variety of goods purchased directly through various methods of distribution which bypass traditional retailing outlets (Table 17.10). Major commodities handled by these direct selling businesses in 1981 included: dairy products, \$314.0 million; newspapers, \$286.9 million; cosmetics and costume jewellery, \$272.7 million; bakery products, \$205.1 million; books, \$189.6 million; household electrical appliances including vacuum cleaners, \$169.5 million; and brushes, brooms, mops and household soaps and cleaners, \$116.0 million.

Personal selling at house parties and other demonstrations through person-to-person contacts is the best known of the various methods of direct selling and accounted for \$756.9 million or 28.5% of the total spent on direct purchases in 1981. Sales made by home delivery or door-to-door as another mode of direct selling to the household consumer accounted for 23.0% or \$609.3 million. Sales by mail amounted to \$571.1 million and constituted 21.5%

of total direct sales. These figures of mail-order purchases do not include foreign mail-order sales made to Canadians nor the mail-order sales of Canadian department stores. Other methods of direct selling which bypass the regular retail outlets are sales made from showrooms and premises of manufacturing companies and primary producers, which accounted for 21.5% (\$570.1 million), and miscellaneous sales made from temporary roadside stands and market stalls, exhibitions and shows, and purchases of meals and alcoholic beverages on airlines, ferries and railways which accounted for 5.5% (\$146.8 million) in 1981.

**Market research.** Much of the data on merchandising and services is brought together with other industrial and demographic data in an annual publication entitled *Market research handbook* (Statistics Canada 63-224). The basic purpose of this handbook is to provide a convenient source of information and reference for people who are engaged in analyzing Canadian markets at local, provincial, regional and national levels. The handbook indicates trends by showing data for earlier years as well as reporting the latest available information. These data should help the marketing practitioner in assessing the dynamics of marketing such as population growth, demographic characteristics, income distribution and changes in consumer habits.

## 17.2 Service trades

The broad range of services provided by businesses classified to this sector includes amusement and recreational services (such as theatres, bowling, golf, skiing); personal services (barber and beauty shops, laundering and dry cleaning, funeral directors); food serving and accommodation services (hotels, restaurants, caterers); business services (computer, accounting, legal); and miscellaneous services (automobile rental, travel agencies).

Also in the scope of this major sector are non-commercial services such as institutions, trade and professional associations, religious, community and fraternal organizations and service clubs. Services related to health, education, finance and governments are excluded, as are service stations, garages and repair shops, which are included in retail trade.

### 17.2.1 Traveller accommodation

Table 17.12 summarizes the major types of accommodation services over a five-year period from 1978 to 1982. Total accommodation receipts in 1982 amounted to \$5.3 billion, an increase of 46.0% over 1978. Hotels accounted for \$4.3 billion or 81.7% of the 1982 total receipts while motels totalled \$604.0 million (11.4%) and the remaining \$367.9 million (6.9%) was accounted for by tourist homes, tourist

courts and cabins, outfitters and tent and trailer campgrounds. Total receipts include such source items as sales of rooms, food, alcoholic beverages, merchandise and other services provided by traveller accommodation businesses — telephone, valet, laundry and parking. A further breakdown of traveller accommodation data by province is in Table 17.13.

#### 17.2.2 Food and beverage industry

In January 1980 a sample survey of the food and beverage industry was introduced by Statistics Canada to produce monthly estimates of receipts for the following five kinds of business: licensed, unlicensed and take-out restaurants, and caterers and taverns.

Restaurant, caterer and tavern receipts totalled nearly \$9.6 billion in 1982 or 5.1% more than the \$9.1 billion estimated for 1981. Of the 1982 totals, \$4.3 billion was reported by licensed restaurants, \$2.6 billion by unlicensed restaurants, \$1.2 billion by take-outs, \$819.7 million by caterers and \$679.1 million by taverns.

#### 17.2.3 Engineering and scientific services

A census-type survey was conducted in 1982 to update the results from a 1978 survey. Fee income in 1982 was reported as \$2.2 billion for 2,236 consulting engineering firms. The 2,470 firms providing other engineering and scientific services indicated total operating revenue of \$1.1 billion. Included in this latter group are geologists, metallurgists, assayers, scientific laboratories (excluding medical) and surveyors.

#### 17.2.4 Offices of architects

A census-type survey was conducted in 1982 to update results from a 1977 survey. Published results for the 1,470 offices of architects showed fee income of \$469.3 million in 1982.

#### 17.2.5 Computer services

In 1982 there were 1,808 computer services companies, reporting operating revenues of nearly \$3.2 billion. Of these companies, 1,752 were primarily engaged in providing computer services, with operating revenue over \$1.3 billion (42.2%) while 56 firms were primarily engaged in providing rental or lease of EDP hardware, with operating revenue over \$1.8 billion (57.8%). Table 17.24 summarizes the growth of companies that were primarily engaged in providing computer services over a three-year period.

#### 17.2.6 Franchising

In 1981, 45,733 franchise locations reported net sales and receipts of \$46.8 billion, an increase of 20.3% over 1980 when 44,497 locations reported net sales and receipts of \$38.9 billion (Table 17.23).

Business services recorded the largest percentage increase at 44.9% due to the rapid growth of real estate operations. Spectacular increases in the net

sales and receipts of both drug stores and computer and audio outlets were largely responsible for an increase of 26.4% in the retail trade sector. The popularity of "do it yourself" automotive product stores contributed significantly to a 23.4% increase shown for the automotive products and services sector.

#### 17.2.7 Charitable organizations

A 1980 program was designed to cover all charities registered with Revenue Canada under Section 149 of the Income Tax Act. Included are charitable organizations and foundations founded to assist the poor, handicapped or distraught, to promote the advance of religion, health or education or for purposes to benefit the community as a whole.

A total of 39,965 charitable organizations reported revenues of \$5.8 billion and expenditures of \$5.3 billion. Religious organizations reported revenues of \$2.4 billion and welfare organizations, \$1.4 billion. Benefits to the community organizations reported \$810 million, health organizations, \$670 million, education, \$480 million and miscellaneous organizations, \$90 million.

### 17.3 Wholesale trade

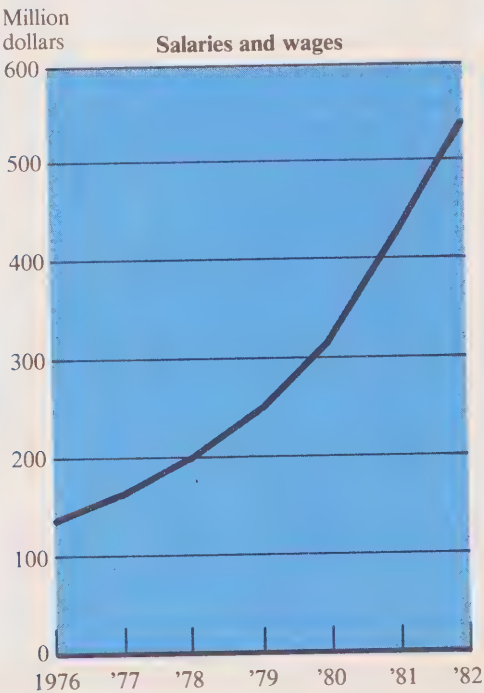
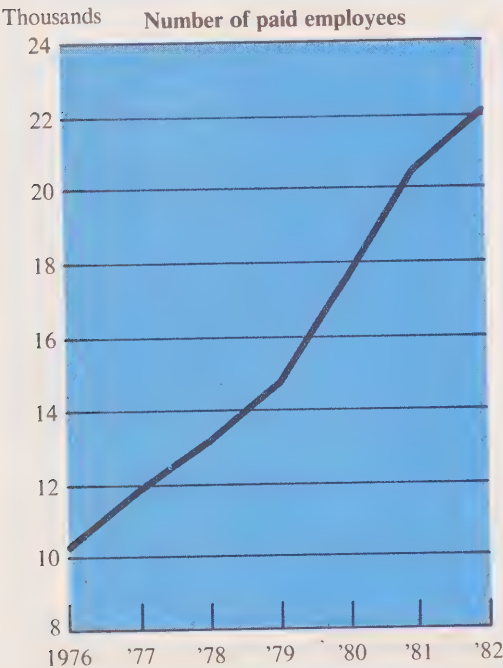
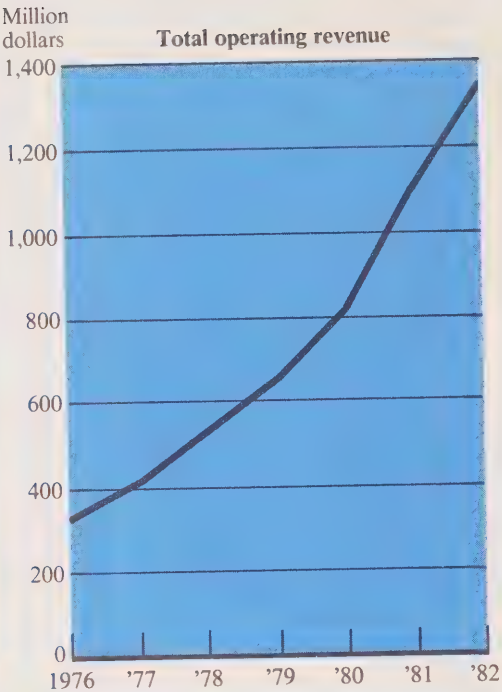
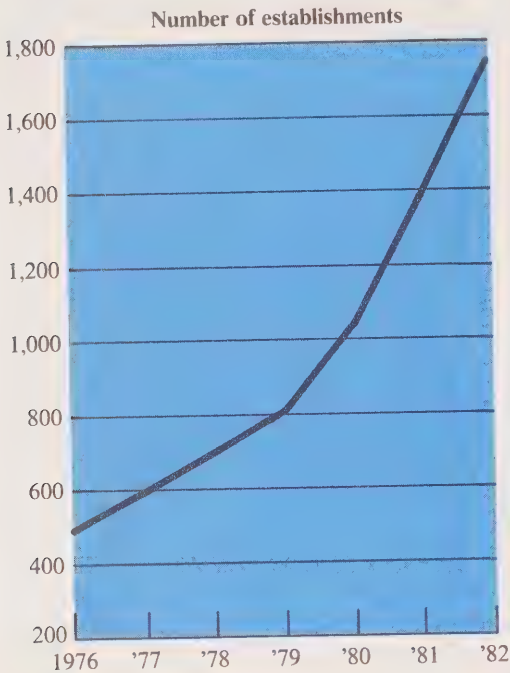
Wholesalers are primarily engaged in buying merchandise for resale to retailers; to industrial, commercial, institutional and professional users; to other wholesalers; to farmers for use in farm production; or for export. Or they act as agents in connection with such transactions. Businesses engaged in more than one activity, such as wholesaling and retailing or wholesaling and manufacturing, are considered to be primarily in wholesale trade if the greater part of their gross margin (the difference between the total sales and the cost of goods sold) is due to their wholesaling activity.

Wholesale trade statistics measure the total volume of trade conducted by all wholesale businesses operating in Canada, whether they are Canadian-owned or subsidiaries of foreign companies and include both domestic and export sales. The total volume of trade measured by Statistics Canada cannot be equated with the value of goods passing through the wholesale sector of the economy because at times wholesale businesses sell to each other and thus the value of the same merchandise may be recorded more than once.

According to certain common characteristics, each wholesale establishment and location (wholesale outlet) is assigned to one of the following two principal types of operation:

**Wholesale merchants** — establishments or locations primarily engaged in buying and selling goods on their own account. Included in this category are wholesalers known as: drop shippers or desk jobbers, export merchants, import merchants, mail-order

Chart 17.2  
**Computer services in Canada, 1976-82**



wholesalers, rack jobbers or voluntary general wholesale distributors.

**Agents and brokers** — establishments or locations primarily engaged in buying or selling, on a commission basis, products owned by others. They may be known as an auction company, commission merchant, import agent or broker, export agent or broker, manufacturers agent, purchasing agent or resident buyer and selling agent.

### 17.3.1 Wholesale merchants

Wholesale merchants account for about 80% of the total volume of trade and had estimated sales of \$147.9 billion in 1981, up 34.9% from the \$109.6 billion volume reported in 1979. The most notable increases in volume of trade over the two-year period were reported by wholesalers of farm products (93.4%), petroleum products (57.0%), wholesalers not elsewhere specified (44.6%), household furniture and home furnishings (34.4%), and electrical machinery, equipment and supplies (33.9%). The only trade group to show a decline was lumber and building materials (-1.6%). Increases higher than the national average (34.9%) were posted in: Ontario (35.6%), Manitoba (35.7%), Saskatchewan (75.2%), Alberta (67.8%) and British Columbia including Yukon and Northwest Territories (41.4%). In terms of geographic distribution, in 1981 wholesale merchant establishments in Quebec and Ontario accounted for 58.8% of the total volume of trade, establishments based in the Atlantic provinces claimed 4.3%, while merchants in Western Canada increased their share to 36.9% of the total, up from 33.3% in 1979.

Tables 17.15 and 17.16 show the volume of trade of wholesale merchant establishments for selected years between 1973 and 1981.

### 17.3.2 Agents and brokers

During 1981, agent and broker establishments reported \$775.1 million in gross commissions earned by facilitating the movement of goods valued at \$27 billion. Commissions as a percentage of the value of goods bought or sold on a commission basis increased to 2.8% in 1981 from 2.5% in 1980 when commissions of \$728.7 million were earned on goods valued at \$28.7 billion. The total volume of trade reported by agent and broker establishments amounted to \$28.9 billion in 1981, a decline of 2.4% from the \$29.6 billion reported the previous year. The petroleum products group accounted for the largest share of total commissions, 27.7%, with commissions of \$214.7 million on goods valued at \$3.5 billion.

Table 17.17 shows the volume of trade of agent and broker establishments, for the years 1978-81. Table 17.18 shows the gross commissions earned by agent and broker establishments, for the years 1978-81.

### 17.3.3 Control and sale of alcoholic beverages

The retail sale of alcoholic beverages in Canada is controlled by provincial and territorial government liquor control authorities. Alcoholic beverages are sold directly by most of these authorities to the consumer or to licensees for resale. However, in some provinces beer and wine are sold directly by breweries and wineries to consumers or to licensees for resale. During the year ended March 31, 1982, provincial government liquor authorities operated 1,117 retail stores and had 477 agencies in smaller centres.

Table 17.21 shows the value and volume of sales of alcoholic beverages in the years ended March 31, 1981 and 1982. The value does not always represent the final retail selling price to the consumer because in some cases only the selling price to licensees is known. Volume of sales is a more realistic indicator of trends in consumption, but as a measure of personal consumption by Canadians it is subject to the same limitations as value sales and includes, in addition, purchases by non-residents.

Government revenue specifically related to alcoholic beverages and details of sales by value and volume for each province are given in Table 17.22. *The control and sale of alcoholic beverages in Canada* (Statistics Canada 63-202) shows further detail as well as volume figures of production and warehousing transactions, the value and volume of imports and exports and the assets and liabilities of provincial liquor commissions.

## 17.4 Co-operatives

**Co-operatives in 1982.** Business volume of co-operatives rose 8.5%, a little more than half the increase of the previous year. Taken in conjunction with an inflation rate of about 10% in consumer prices and 3% in farm input prices, this was not really much of a gain.

Total co-operative business volume came to \$13.9 billion based on rising volumes for wheat, food products and the services sector, a combination of higher volume and prices for dairy products and strictly higher prices for petroleum.

The number of associations rose by about 6% to pass the 3,000 mark led by a countrywide surge in housing incorporations and a continuing rise in the popularity of day care and nursery associations, mainly in Ontario and Western Canada. Membership in co-operatives expanded almost 4% with purchasing and service associations providing the gain. The larger contributions came from food co-operatives in Alberta and Newfoundland and student supply associations in Quebec.

**Co-operatives in 1981.** Co-operative business volume in Canada (excluding wholesales) rose \$1.8 billion or 16% in 1981, just about matching the gain in personal disposable income. Table 17.19 gives

summary statistics of co-operative associations for 1978-81 and the following information compares 1981 with 1980.

During the year consumer prices rose 12%, farm cash receipts climbed 19% and farm net income 27%, while retail sales rose 13%. It was a time of soaring interest rates and high energy prices along with a plunge into economic recession in the latter half of the year.

For co-operatives the number of reporting associations rose by almost 200, with three-quarters of the increase occurring in the service group which has been on a fast growth track in recent years. Membership inched up about 2% with most of the growth coming in the consumer co-operatives. Membership in the service associations declined with the closing of the large medical insurance co-operative in Ontario.

Farm product marketings contributed the largest gain in revenues, \$971 million, but merchandise and supply sales made the most impressive percentage gain, 20%, as against 15% for marketings. Asset values expanded \$1.2 billion with the western grain pools accounting for more than half of it.

#### 17.4.1 Financial structure

Assets of the co-operatives passed the \$5 billion level in 1981 for a staggering gain of \$1.2 billion or 29%. The western grain pools accounted for 55% of this increase with a surge in receivables and inventories. In 1980 both had been diminished as heavy export sales coincided with a lower crop. But a bumper crop in 1980-81 along with another good marketing year more than replenished these two highly variable asset items.

Eliminating the special effects of short-term swings in the current assets of the volatile grain sector would show an asset gain of 13%, more in line with the 16% rise in overall co-operative business volume.

Property and equipment showed another substantial gain of \$326 million, or 21%, with service associations accounting for about half the increase. Among the marketing and purchasing associations, the more outstanding expansion of facilities occurred in the dairy industry in Quebec and the West, meat packing in the Lac Saint-Jean area of Quebec, fruit and vegetable packing in British Columbia, food retailing in the Atlantic region and Alberta and feed milling in British Columbia and Quebec.

#### 17.4.2 Product marketings

Farm product marketings ran up another growth year in 1981 as three of the large commodity groups, grains, dairy products and oilseeds, showed gains. The fourth, cattle and sheep, declined for the second year in a row. On a percentage basis, vegetables at 33%, "other" at 26%, grains at 24% and forest products at 24% were the leading gainers. All other groups registered fair to medium increases except for honey and maple products which were almost

unchanged. Fruit was down 4%. On a regional basis, Quebec recorded the largest increase in marketings, 18% with strong gains in all commodity classes except cattle and honey and maple products.

Vegetable marketing values soared, led by potatoes in a standard supply-demand situation where crop production declined and prices rose. Fruit marketing revenues declined about 4% as a huge North American crop of apples and most other fruit pushed prices down. In the "other" category the continuing success of flower grower co-operatives in British Columbia and Ontario accounted for half the increase.

Grain marketings boomed for a second straight year. Canadian producers were favoured by another lucrative situation in international markets as the Soviet Union was hit again by a bad crop. Early port openings after an easy winter, a minimum of labour strife and some major additions to the transportation and storage system enabled co-operatives, along with other participants in the Canadian grain trade, to take full advantage of the marketing opportunity presented. Oilseed marketings rose \$51 million or 7% over the previous year.

Co-operative dairy sales rose again across the country averaging about 15% and continuing a trend toward acquisition of facilities from the private business sector as well as a willingness to take advantage of opportunities in the export market. Poultry volume climbed in tandem with the overall industry. Almost all of the increase was due to higher prices as the glut situation eased in the competitor pork industry. Egg returns rose moderately as a cutback program on the laying flock pushed up prices. Hog volume declined in the West but rose on higher prices in Ontario and the Atlantic region and surged 39% in Quebec indicating a higher share of the industry in the province for co-operatives. Most of the western decrease occurred in Saskatchewan as the wheat pool discontinued assembling hogs for the provincial marketing board. Cattle marketings slid 20% in a continuation of the rather poor conditions of the previous year; mainly low prices and high interest rates.

Honey marketings were almost unchanged in a year of lower exports and domestic consumption, slightly higher prices and reduced production due to poor weather. Maple product marketings changed little as prices declined in the face of increased production and a huge inventory overhang from previous years.

#### 17.4.3 Sales of supplies

Consumer goods sales by co-operatives in Canada rose \$260 million or 18% in 1981, while sales of agricultural supplies rose 14%. Food products, the largest individual supply category, climbed 19% with strong gains in all regions of the country. Food prices as measured by the consumer price index advanced

only about 6% in the year so this indicates a further expansion of the co-operative share of the food retailing market. Dry goods ran up gains of 14% and home hardware and other consumer sales, 19% as a broadening of merchandise lines helped to offset the negative effects of high interest rates and unusual weather on big-ticket items such as snowblowers and power lawnmowers.

An unfortunate event affecting the co-operative movement in the Atlantic region occurred in 1981 as the British Canadian Co-operative Society in Sydney Mines, NS, was forced to close down. It was the oldest consumer co-operative in Canada, having commenced operations in 1906 and had served its community ever since. But a recent surplus of new retail outlets in the area had made it impossible to carry on as a viable operation.

Feed sales rose about 13%, almost all of the increase due to price as consumption sagged in most areas, but prices climbed with an overall world short supply situation. Farm supplies sales had a small gain of only 2%, presumably influenced by the drop in farm net income in the previous year. Farmer use of fertilizers and chemicals was uneven across the country, down in Saskatchewan, Manitoba and Quebec, up in other areas for a large net gain of 23% in value, mostly because of prices as demand for nitrogenous fertilizers started to creep ahead of supply. Seed sales rose a moderate 7%. Farm machinery sales rose 12% in a generally dismal industry outlook for most of North America. Western farmers with another year of generous returns from grain sales ran counter to the trend and were able to more than offset the general decline. Much of their purchasing was from Canadian Co-operative Implements which serves farmer members across the region.

Petroleum sales jumped 42% in the year as co-operative customers along with everybody else suffered the effects of the upward pressures of world oil prices. But physical volume declined as users tried to shield themselves from the price escalation. Building materials rose in line with the price indexes, but in the face of unprecedented interest rates and a devastating situation in the home building industry the only buoyant factor was sales for the home improvement field. This continuing penchant on the part of home owners is spurred in part by these same high interest rates which makes trading up to more expensive accommodations an almost prohibitive undertaking. Other supply sales declined 10%.

## 17.5 Tourism

Tourism Canada, formerly the Canadian Government Office of Tourism (CGOT), is the federal agency responsible for maintaining the growth of tourism in Canada. Its objectives are: to increase the demand for travel facilities and services; to expand and increase

the efficiency of Canada's tourism industry; to co-ordinate tourism-related activities with other federal departments, the provincial/territorial tourism departments and private industry; and to provide and maintain a centre of information on tourism.

Tourism revenues totalled \$17.7 billion in 1982 with the bulk of this, \$14 billion, coming from Canadians travelling in their own country.

In 1982, visitors from the United States numbered 32.4 million, down 18.5% from the previous year. The 2 million offshore travellers primarily came from: the United Kingdom (474,097); the Federal Republic of Germany (219,715); Japan (139,447); France (132,067); the Netherlands (79,265); Italy (62,224); and Mexico (44,410). This resulted in revenues from US visitors of \$2.4 billion, down 3.6% and revenues from offshore visitors of \$1.3 billion, up 4.2% from 1981. However, the bulk of Canada's tourism income traditionally comes from Canadians travelling in Canada.

Over 100,000 businesses, most of them Canadian-owned, are directly involved in tourism. That's almost 300,000 hotel and motel rooms, nearly 50,000 eating places and about 5,000 travel agencies. It's also a kaleidoscope of facilities and attractions — special events, shopping and entertainment centres, museums, spectacular scenic parks, marinas and a coast-to-coast transportation system.

Every 100,000 foreign visitors to a community can mean \$19 million in income, money that has made its way through the economy. Recent research indicates that a typical couple from the United States visiting Canada stays an average of 4.5 nights and spends almost \$80 per day.

As a result of a steady decline in Canada's share of the US foreign market from 78% in 1960 to 63% in 1970 and 47% in 1983, the number of Canadians visiting the US exceeded the number of Americans coming to Canada for the first time in 1983. Also, in 1983, travel from offshore countries dropped off by a total of 11%: Britain was down 16.5%, Germany down 9.2%, Japan down 0.7%, France down 25.7%, the Netherlands down 23.4% and Mexico down 39.3%. Only Hong Kong with an increase of 17.2% and all Asia, up 8%, registered increases. This was the basis for a federal government announcement, in January 1984 of plans to spend an additional \$14.5 million in promoting Canada as a good place to visit, following an increase of \$7.5 million announced in October 1983. About \$12 million was to be spent on advertisements in the United States, particularly in areas within a one-day drive of Canada.

## 17.6 Consumer affairs legislation

The federal consumer and corporate affairs department administers federal legislation and policies affecting business, and demonstrates that a

competitive marketplace can benefit consumers, business people and investors. Four bureaus share responsibility for achieving the department's marketplace objectives.

**The consumer affairs bureau** co-ordinates government activities in the field of consumer affairs through four branches: consumer services, legal metrology, consumer fraud protection, and product safety. The corporate affairs bureau administers legislation and regulations pertaining to corporations; its branches are responsible for corporations, bankruptcy and securities. The bureau also administers laws pertaining to patents, copyright, timber marks, industrial design, and trade marks, with a branch responsible for each of these fields. The bureau of competition policy has branches specializing in resources, manufacturing, services and marketing practices; its economic analysis and policy evaluation branch has responsibilities in federal-provincial relations, legislative development, research inquiries and international relations.

The department maintains regional and district offices in Vancouver, Winnipeg, Toronto, Montréal and Halifax, and district and local offices in other cities. These offices ensure that laws and regulations administered by the department with the exception of the statutes administered by the corporations branch are uniformly applied and interpreted in all parts of the country. The field force includes consumer services officers, inspectors and specialists in the fields of bankruptcy and marketing practices.

**Competition legislation.** Canadian competition legislation seeks to eliminate restrictive trade practices in order to stimulate maximum production, distribution and employment through open competition. Legislative measures, including some formerly included in the criminal code, were amended in 1960 and consolidated into the Combines Investigation Act (RSC 1970, c.C-23). An act to amend this act was passed in December 1975 (SC 1974-75-76, c.76) and came into effect in 1976.

The Combines Investigation Act makes it illegal to conspire to prevent, or lessen unduly, competition in production, manufacture, purchase, barter, sale, storage, rental, transportation or supply of a product of trade or commerce. Price maintenance, predatory pricing and price discrimination are also prohibited.

Under the act it is illegal to participate in a merger or a monopoly that has operated or is likely to operate to the detriment of the public, whether consumers, producers or others.

The act applies also to certain specified business practices which are subject to review and remedial order by the Restrictive Trade Practices Commission following an application by the director of investigation and research. These practices include refusal to sell, exclusive dealing, tied selling, market restrictions and consignment selling.

The Combines Investigation Act includes provisions against misleading advertising and deceptive practices. It forbids all misleading representations that are made for the purpose of promoting a product, as well as such practices as double ticketing, pyramid selling, referral selling, bait and switch selling and certain types of promotional contests.

The director of investigation and research, who is also the assistant deputy minister for the bureau of competition policy, is responsible for investigating conspiracies, combinations or other offences in restraint of competition.

After examining all the information available, if the director believes that it proves the existence of an offence he usually submits a statement of the evidence directly to the attorney general, who then takes the necessary legal proceedings. Where an investigation reveals the existence of a reviewable business practice, the director applies to the Restrictive Trade Practices Commission which is empowered to issue appropriate remedial orders where serious anti-competitive effects are found.

**Food.** The department of consumer and corporate affairs is responsible for regulation on behalf of the consumer of the quality, quantity, composition, substitution, packaging, labelling and advertising of food products, by the administration of the Food and Drugs Act, the Canada Agricultural Products Standards Act and the Fish Inspection Act.

**Measurement.** The Weights and Measures Act prescribes the legal standards of weight and measure for use in Canada; it also ensures control of the types of all weighing and measuring devices used for commercial purposes, and provides for in-use surveillance directed toward the elimination of device-tampering and short-weight sales. The act is complementary to consumer packaging and labelling legislation.

**Metric conversion.** The Metric Weights and Measures Act of 1871 made the use of the metric system legal in Canada. The Weights and Measures Act of 1971 specified the most recent evolution of the metric system, the International System of Units (SI), as the legal form of the metric system for use in Canada. The *White Paper on metric conversion in Canada*, tabled in the House of Commons in January 1970, stated that the government accepted the following broad principles: that the eventual adoption in Canadian usage of a single coherent measurement system based on metric units should be acknowledged as inevitable and in the national interest; that this single system should come to be used for all measurement purposes required under legislation, and generally be accepted for all measurement purposes; that planning and preparation in the public and private sectors should be encouraged in a manner to achieve the maximum

benefits at minimum cost to the public, to industry, and to government at all levels.

Since 1972 over 2,000 volunteers in all sectors of the economy developed plans for metric conversion. These plans have been published by Metric Commission Canada, which was established by the Canadian government as a result of the white paper, to co-ordinate the changeover.

Such widely varied elements of Canadian life as temperature, precipitation, atmospheric pressure, wind speed, road signs, much of the construction and automotive industries, grain sales, wines, textiles, chemical products, the petroleum industry, postal scales and most grocery store items have been converted to metric.

Conversion of in-store weighing of meats, produce and bulk foods to metric was, with minor exceptions, completed by January 1984, although an Ontario court decision in the fall of 1983 had stated that such conversion could only be voluntary.

Measurement units such as miles, pounds and acres have not yet disappeared from the language of Canadians, but conversion of the economy to metric has largely been accomplished. Consequently the Metric Commission began a winding-down operation in mid-1983, to be concluded by March 1985. As of that date a metric office with a small staff in the federal consumer and corporate affairs department will co-ordinate any remaining conversion programs.

**Appliance labelling, energy consumption.** Refrigerators, freezers, washers, dishwashers, clothes dryers and ranges sold in Canada must show an Energuide label. This label indicates the kilowatt hours a month of energy consumption of each model. This energy labelling requirement is regulated under the Consumer Packaging and Labelling Act.

**Corporations branch** of the consumer and corporate affairs department administers the Canada Business Corporations Act, the Canada Corporations Act, the Canada Co-operatives Association Act and the Boards of Trade Act. The branch has a statutory duty to issue formal documents in connection with corporations created under other federal acts such as the Loan Companies Act, Trust Companies Act, the Canadian and British Insurance Companies Act, and the Railway Act.

All federal business corporations other than those carrying on business as financial intermediaries must be incorporated under the Canada Business Corporations Act. Federal non-profit corporations continue to be incorporated under Part II of the Canada Corporations Act until a proposed new Non-profit Corporations Act is passed by Parliament.

## 17.7 Government aid to business

Government programs are available to help in several stages of developing a business by providing financing, information or technical guidance.

**Start-up stage.** The success of a business operation can be influenced by the initial research and investigation. Agencies such as the Federal Business Development Bank offer training and counselling for new entrepreneurs. Statistics Canada can provide data on potential business localities. The regional industrial expansion department (DRIE) may provide information through its small business secretariat or its business information centres in 10 major cities across Canada. See also Chapter 16, Manufacturing, section 16.4 *Federal assistance to manufacturing*.

**Financing.** One of the most common problems businesses face is obtaining adequate debt and equity financing, whether for start-up or expansion. The main types of financial assistance offered by the federal government are loan guarantees and insurance, loans, grants and tax measures. The Federal Business Development Bank also offers equity financing through its investment banking department. See also Chapter 18, Banking, finance and insurance, sub-section 18.1.5 *Federal Business Development Bank*.

**Marketing.** Product marketing involves identifying, investigating, and developing both domestic and export markets. Whether a new business is being started or an existing product line is being expanded, a thorough marketing plan can better its chances of success. Several sources of information are available from the federal government to assist with market investigation. Export assistance is available through the external affairs department to help finance the sale of products in export markets and to aid in market investigation and product promotion.

**Research and development.** Financial support for industrial research, innovation and product development is offered by the federal government to specific industrial sectors. Up-to-date information is available on new inventions and developments. Various government testing and laboratory facilities provide support services to the business community.

**Expansion.** Some federal programs may be of assistance in modernizing a firm or making major adjustments because of changing market conditions. For example, loan guarantees and other financing support are available for modernization in slow-growth areas. Tax concessions are provided in other instances.

**Developing the work force.** To function efficiently a business needs good workers with the right skills. A wide range of federal services and programs helps employers obtain employees with the skills necessary to meet current and anticipated future needs. This includes assistance for occupational training and support of industry through the development of workers. Various programs stress the retraining of workers displaced by technological change, support for training new workers and the scarcity of high-level

skills that are critical for future industrial development. Departments and agencies including the employment and immigration commission (CEIC) and Labour Canada provide assistance in recruiting, collective bargaining, employee relations and management development.

**ABC handbook.** Occasionally federal and provincial programs may either overlap or be complementary to one another. A review of all the assistance

programs oriented to a specific business sector will lead to the most beneficial results for an enterprise.

The Federal Business Development Bank publishes an ABC handbook, *Assistance to business in Canada*, as a part of the federal government commitment to support the Canadian business community. The third edition of the series published in 1984 has 10 volumes. Each one lists programs by department or agency and adds a supplement on the programs of a particular province or provincial and adjacent territorial region.

### Sources

- 17.1 - 17.3.2 Merchandising and Services Division, Statistics Canada.
- 17.3.3 Public Institutions Division, Statistics Canada.
- 17.4 Marketing and Economics Branch, Agriculture Canada.
- 17.5 Corporate Affairs, Tourism Canada.
- 17.6 Communications Branch, Department of Consumer and Corporate Affairs.
- 17.7 Public Affairs, Federal Business Development Bank.

### Selected references

- Assistance to business in Canada, ABC 1984*, (10 volumes). Federal Business Development Bank, Ottawa, 1984.
- Campus book stores*. Statistics Canada 63-219 (annual), Ottawa.
- Computer service industry*. Statistics Canada 63-222 (annual), Ottawa.
- The control and sale of alcoholic beverages in Canada*. Statistics Canada 63-202 (annual), Ottawa.
- Co-operation in Canada 1981*. Agriculture Canada (annual), Ottawa, 1983.
- Co-operation in Canada 1982*. Agriculture Canada (annual), Ottawa, 1984.
- Department stores in Canada*. Statistics Canada 63-225 (annual), Ottawa.
- Direct selling in Canada*. Statistics Canada 63-218 (annual), Ottawa.
- Market research handbook, 1984*. Statistics Canada (annual), Ottawa, 1984.
- New motor vehicle sales*. Statistics Canada 63-208 (annual), Ottawa.
- Retail chain stores*. Statistics Canada 63-210 (annual), Ottawa.
- Retail trade*. Statistics Canada 63-005 (monthly), Ottawa.
- Restaurant, caterer and tavern statistics*. Statistics Canada 63-011 (monthly), Ottawa.
- Travel between Canada and other countries*. Statistics Canada 66-201 (annual), Ottawa.
- Traveller accommodation statistics*. Statistics Canada 63-204 (annual), Ottawa.
- Vending machine operators*. Statistics Canada 63-213 (annual), Ottawa.
- Wholesale trade*. Statistics Canada 63-008 (monthly), Ottawa.

TABLES

- ..

not available
- ...

not appropriate or not applicable
- nil or zero
- too small to be expressed
- e

estimate
- p

preliminary
- r

revised
- certain tables may not add due to rounding

17.1 Retail trade, by kind of business and by province, percentage and percentage distribution

Kind of business and province	1979 \$'000,000	1980 \$'000,000	1981 \$'000,000	1982 \$'000,000	Percentage change 1981-82	Percentage distribution 1982
Kind of business						
Combination stores (groceries and meat)	14,660.8	16,333.6	18,305.2	19,906.2	+ 8.7	20.4
Grocery, confectionery and sundries stores	3,537.9	3,870.5	4,553.1	4,938.4	+ 8.5	5.1
All other food stores	1,295.4	1,352.3	1,644.2	1,945.9	+18.3	2.0
Department stores	8,534.4	9,366.8	10,218.1	10,208.1	-0.1	10.5
General merchandise stores	1,791.5	1,916.1	2,013.5	2,080.0	+3.3	2.1
General stores	1,394.4	1,544.5	1,724.7	1,898.4	+10.1	1.9
Variety stores	965.6	993.7	1,064.7	1,071.3	+0.6	1.1
Motor vehicle dealers	15,421.4	15,697.9	16,546.9	14,413.0	-12.9	14.8
Used car dealers	335.1	438.9	495.3	461.5	-6.8	0.5
Service stations	5,167.8	5,894.7	7,529.7	8,728.5	+15.9	8.9
Garages	1,048.8	1,092.7	1,344.5	1,376.2	+2.4	1.4
Automotive parts and accessories stores	1,570.9	1,740.8	1,991.4	2,175.0	+9.2	2.2
Men's clothing stores	927.1	973.1	1,073.3	1,113.7	+3.8	1.1
Women's clothing stores	1,405.5	1,583.6	1,812.1	1,913.0	+5.6	2.0
Family clothing stores	1,092.0	1,188.2	1,366.9	1,275.1	-6.7	1.3
Specialty shoe stores	93.5	108.8	128.0	135.2	+5.6	0.1
Family shoe stores	672.9	749.7	852.3	882.4	+3.5	0.9
Hardware stores	756.5	792.4	831.1	887.6	+6.8	0.9
Household furniture stores	1,128.2	1,220.6	1,365.6	1,209.5	-11.4	1.2
Household appliance stores	266.5	295.9	369.7	381.9	+3.3	0.4
Furniture, TV, radio and appliance stores	550.7	547.9	542.6	510.0	-6.0	0.5
Pharmacies, patent medicine and cosmetics stores	2,395.4	2,728.1	3,227.2	3,913.7	+21.3	4.0
Book and stationery stores	364.9	423.7	447.2	465.9	+4.2	0.5
Florists	281.4	320.3	362.1	380.6	+5.1	0.4
Jewellery stores	686.9	745.6	813.2	822.5	+1.1	0.8
Sporting goods and accessories stores	946.4	1,014.6	1,175.4	1,289.9	+9.7	1.3
Personal accessories stores	1,061.6	1,207.4	1,333.3	1,378.5	+3.4	1.4
All other stores	8,671.8	9,884.5	11,161.5	11,876.6	+6.4	12.2
Total	77,025.1	84,026.6	94,292.8	97,638.5	+3.5	100.0
Province or territory						
Newfoundland	1,435.4	1,497.7	1,638.1	1,761.2	+7.5	1.8
Prince Edward Island	360.3	368.1	400.7	412.4	+2.9	0.4
Nova Scotia	2,523.6	2,643.0	2,889.1	3,097.8	+7.2	3.2
New Brunswick	1,975.5	2,119.1	2,317.5	2,448.6	+5.7	2.5
Quebec	19,624.5	20,894.9	22,670.6	23,496.8	+3.6	24.1
Ontario	27,515.3	29,666.2	33,732.4	35,543.3	+5.4	36.4
Manitoba	2,935.9	3,163.9	3,578.4	3,830.0	+7.0	3.9
Saskatchewan	3,202.5	3,452.7	3,876.2	4,042.1	+4.3	4.1
Alberta	8,052.8	9,410.7	10,906.4	10,941.3	+0.3	11.2
British Columbia	9,194.6	10,572.0	11,999.8	11,766.2	-1.9	12.1
Yukon and Northwest Territories	204.7	238.3	283.6	298.8	+5.4	0.3

17.2 Sales of chain and independent stores, by kind of business

Kind of business	Chain stores			Independent stores		
	1979 \$'000,000	1980 \$'000,000	Per- centage change 1979-80	1979 \$'000,000	1980 \$'000,000	Per- centage change 1979-80
Combination stores (groceries and meat)	10,327.8	11,192.2	+ 8.4	4,333.0	5,141.4	+18.7
Grocery, confectionery and sundries stores	673.7	850.6	+26.3	2,864.2	3,019.9	+ 5.4
All other food stores	111.1	113.8	+ 2.4	1,184.4	1,238.4	+4.6
Department stores	8,534.4	9,366.8	+ 9.8	—	—	—
General merchandise stores	1,429.0	1,530.5	+ 7.1	362.5	385.6	+ 6.4
General stores	435.4	531.2	+22.0	959.1	1,013.3	+ 5.7
Variety stores	737.3	772.0	+4.7	228.3	221.8	-2.9
Motor vehicle dealers	207.3	18.2	-9.2	15,214.1	15,509.7	+1.9
Used car dealers	—	—	—	335.1	438.9	+31.0
Service stations	925.5	1,105.9	+19.5	4,242.2	4,788.7	+12.9
Garages	—	—	—	1,048.8	1,092.7	+4.2
Automotive parts and accessories stores	184.2	158.4	-14.0	1,386.6	1,582.4	+14.1
Men's clothing stores	381.6	335.4	+5.3	608.4	637.7	+4.8

## 17.2 Sales of chain and independent stores, by kind of business (concluded)

Kind of business	Chain stores			Independent stores		
	1979 \$'000,000	1980 \$'000,000	Per- centage change 1979-80	1979 \$'000,000	1980 \$'000,000	Per- centage change 1979-80
Women's clothing stores	753.4	873.4	+ 15.9	652.1	710.2	+ 8.9
Family clothing stores	549.0	634.7	+ 15.6	543.1	553.4	+ 1.9
Specialty shoe stores	44.8	49.0	+ 9.4	48.8	59.8	+ 22.5
Family shoe stores	461.3	519.8	+ 12.7	211.7	229.8	+ 8.5
Hardware stores	170.6	228.8	+ 34.1	957.6	991.9	+ 3.6
Household furniture stores	170.6	228.8	+ 34.1	957.6	991.9	+ 3.6
Household appliance stores	107.1	134.2	+ 25.3	443.6	413.7	- 6.7
Furniture, TV, radio and appliance stores	107.1	134.2	+ 25.3	443.6	413.7	- 6.7
Pharmacies, patent medicine and cosmetics stores	533.4	606.8	+ 13.8	1,862.1	2,121.3	+ 13.9
Book and stationery stores	175.5	216.3	+ 23.2	189.4	207.4	+ 9.5
Florists	10.8	15.0	+ 38.9	270.6	305.2	+ 12.8
Jewellery stores	312.2	366.1	+ 17.3	374.6	379.5	+ 1.3
Sporting goods and accessories stores	101.3	101.3	—	845.1	868.3	+ 11.7
Personal accessories stores	284.3	339.1	+ 19.3	777.3	868.3	+ 11.7
All other stores	4,479.4	5,155.4	+ 15.1	4,192.3	4,729.0	+ 12.8
<b>Total</b>	<b>32,013.6</b>	<b>35,535.0</b>	<b>+ 11.0</b>	<b>45,011.5</b>	<b>48,491.6</b>	<b>+ 7.7</b>

Kind of business	Chain stores			Independent stores		
	1981 \$'000,000	1982 \$'000,000	Per- centage change 1981-82	1981 \$'000,000	1982 \$'000,000	Per- centage change 1981-82
Combination stores (groceries and meat)	12,515.0	13,239.6	+ 5.8	5,790.2	6,666.6	+ 15.1
Grocery, confectionery and sundries stores	1,079.2	1,340.5	+ 24.8	3,473.9	3,597.8	+ 3.6
All other food stores	112.8	138.4	+ 22.7	1,531.4	1,807.6	+ 18.0
Department stores	10,218.1	10,208.1	- 0.1	—	—	—
General merchandise stores	1,622.9	1,677.2	+ 3.3	390.5	402.8	+ 3.1
General stores	615.0	733.5	+ 19.3	1,109.7	1,164.9	+ 5.0
Variety stores	873.0	882.4	+ 1.1	191.8	189.0	- 1.5
Motor vehicle dealers	145.0	133.6	- 7.9	16,401.9	14,279.4	- 12.9
Used car dealers	—	—	—	495.3	461.5	- 6.8
Service stations	1,549.9	1,784.3	+ 15.1	5,979.8	6,944.1	+ 16.1
Garages	—	—	—	1,344.5	1,376.2	+ 2.4
Automotive parts and accessories stores	140.6	130.3	- 7.3	1,850.8	2,044.7	+ 10.5
Men's clothing stores	385.8	499.7	+ 29.5	687.6	614.1	- 10.7
Women's clothing stores	1,042.2	1,122.3	+ 7.7	769.9	790.8	+ 2.7
Family clothing stores	755.0	673.1	- 10.8	611.8	602.1	- 1.6
Specialty shoe stores	54.8	57.9	+ 5.7	73.3	77.3	+ 5.5
Family shoe stores	601.3	634.1	+ 5.5	251.0	248.3	- 1.1
Hardware stores	263.4	250.5	- 4.9	1,102.2	959.0	- 13.0
Household furniture stores	157.0	168.6	+ 7.4	385.6	341.4	- 11.5
Household appliance stores	157.0	168.6	+ 7.4	385.6	341.4	- 11.5
Furniture, TV, radio and appliance stores	157.0	168.6	+ 7.4	385.6	341.4	- 11.5
Pharmacies, patent medicine and cosmetics stores	743.8	1,052.5	+ 41.5	2,483.3	2,861.2	+ 15.2
Book and stationery stores	198.3	216.3	+ 9.1	248.8	249.6	+ 0.3
Florists	11.0	15.5	+ 40.9	351.1	365.1	+ 4.0
Jewellery stores	389.8	402.8	+ 3.3	423.4	419.7	- 0.9
Sporting goods and accessories stores	124.6	146.6	+ 17.7	1,050.8	1,143.3	+ 8.8
Personal accessories stores	376.3	422.7	+ 12.3	957.0	955.8	- 0.1
All other stores	5,866.0	6,639.2	+ 13.2	5,295.7	5,237.3	- 1.1
<b>Total</b>	<b>40,001.5</b>	<b>42,750.1</b>	<b>+ 6.9</b>	<b>54,291.2</b>	<b>54,888.4</b>	<b>+ 1.1</b>

<sup>1</sup> Confidential.

## 17.3 Percentage market share of chain stores, by kind of business

Kind of business	1979	1980	1981	1982
Combination stores (groceries and meat)	70.4	68.5	68.4	66.5
Grocery, confectionery and sundries stores	19.0	22.0	23.7	27.1
All other food stores	8.6	8.4	6.9	7.1
Department stores	100.0	100.0	100.0	100.0
General merchandise stores	79.8	79.9	80.6	80.6
General stores	31.2	34.4	35.7	38.6
Variety stores	76.4	77.7	82.0	82.4
Motor vehicle dealers	1.3	1.2	0.9	0.9
Used car dealers	—	—	—	—

## 17.3 Percentage market share of chain stores, by kind of business (concluded)

Kind of business	1979	1980	1981	1982
Service stations	17.9	18.8	20.6	20.4
Garages	—	—	—	—
Automotive parts and accessories stores	11.7	9.1	7.1	6.0
Men's clothing stores	34.4	34.5	35.9	44.9
Women's clothing stores	53.6	55.2	57.5	58.7
Family clothing stores	50.3	53.4	55.2	52.8
Specialty shoe stores	47.9	45.0	42.8	42.8
Family shoe stores	68.5	69.3	70.5	71.9
Hardware stores	1	1	1	1
Household furniture stores	15.1	18.7	19.3	20.7
Household appliance stores	1	1	1	1
Furniture, TV, radio and appliance stores	19.4	24.5	28.9	33.1
Pharmacies, patent medicine and cosmetics stores	22.3	22.2	23.0	26.9
Book and stationery stores	48.1	51.1	44.4	46.4
Florists	3.8	4.7	3.0	4.1
Jewellery stores	45.5	49.1	47.9	49.0
Sporting goods and accessories stores	10.7	1	10.6	11.4
Personal accessories stores	26.8	28.1	28.2	30.7
All other stores	51.7	52.2	52.6	55.9
Total, all stores	41.6	42.3	42.4	43.8

<sup>1</sup>Confidential.

## 17.4 Department store sales by department

Department	1979 \$'000,000	1980 \$'000,000	1981 \$'000,000	1982 \$'000,000	Percentage change 1981-82
Women's, misses' and children's clothing					
Women's and misses' dresses, housedresses, aprons and uniforms	166.5	183.1	198.5	192.0	- 3.3
Women's and misses' coats and suits	180.1	175.8	178.1	173.8	- 2.4
Women's and misses' sportswear	421.7	468.4	551.3	543.0	- 1.5
Furs	30.3	31.3	32.6	34.9	+ 7.1
Infants' and children's wear and nursery equipment	218.7	229.7	265.4	275.5	+ 3.8
Girls' and teenage girls' wear	161.9	182.0	190.5	194.5	+ 2.1
Lingerie and women's sleepwear	171.5	183.6	201.9	211.0	+ 4.5
Intimate apparel	88.5	99.3	111.1	114.6	+ 3.2
Millinery	17.8	17.9	18.1	20.0	+ 10.5
Women's and girls' hosiery	90.3	101.9	110.1	121.5	+ 10.4
Women's and girls' gloves, mitts and accessories	142.9	161.6	177.1	172.8	- 2.4
Women's, misses' and children's footwear	236.4	253.3	272.8	272.3	- 0.2
Total, women's, misses' and children's clothing	1,926.5	2,087.9	2,307.5	2,325.9	+ 0.8
Men's and boys' clothing					
Men's clothing	386.3	422.1	438.6	419.4	- 4.4
Men's furnishings	384.0	412.9	454.7	482.0	+ 6.0
Boys' clothing and furnishings	133.2	132.7	136.2	142.9	+ 4.9
Men's and boys' footwear	144.6	166.6	180.0	178.0	- 1.1
Total, men's and boys' clothing	1,048.1	1,134.3	1,209.5	1,222.3	+ 1.1
Food and kindred products	499.6	577.6	658.3	682.6	+ 3.7
Toiletries, cosmetics and drugs	404.8	461.2	521.5	562.5	+ 7.9
Photographic equipment and supplies	148.4	158.2	167.2	162.7	- 2.7
Piece goods	68.1	67.2	60.9	55.3	- 9.2
Linens and domestics	244.4	267.8	289.5	300.7	+ 3.9
Smallwares and notions	87.3	98.4	104.2	102.0	- 2.1
China and glassware	119.2	134.1	156.3	148.5	- 5.0
Floor coverings	145.8	151.2	150.5	138.4	- 8.0
Draperies, curtains and furniture covers	151.7	162.3	177.1	168.7	- 4.7
Lamps, pictures, mirrors and all other home furnishings	92.7	103.3	112.4	105.8	- 5.9
Furniture	470.0	512.5	541.9	460.3	- 15.1
Major appliances	411.8	451.2	491.6	432.8	- 12.0
Television, radio and music	329.3	364.2	401.9	433.2	+ 7.8
Housewares and small electrical appliances	326.3	370.4	407.1	417.7	+ 2.6
Hardware, paints and wallpaper	285.0	301.9	321.8	316.5	- 1.6
Plumbing, heating and building materials	81.9	98.0	110.7	117.3	+ 6.0
Jewellery	232.5	249.1	269.8	254.3	- 5.7
Toys and games	205.7	226.8	243.8	246.6	+ 1.1
Sporting goods and luggage	279.6	317.5	337.5	334.6	- 0.9
Stationery, books and magazines	249.1	271.9	299.7	312.8	+ 4.4

### 17.4 Department store sales by department (concluded)

Department	1979 \$'000,000	1980 \$'000,000	1981 \$'000,000	1982 \$'000,000	Percentage change 1981-82
Gasoline, oil, auto accessories, repairs and supplies	176.6 205.4	195.2 221.9	213.0 251.7	212.1 250.8	-0.4 -0.4
Receipts from meals and lunches					
Receipts from repairs and services	344.4	382.8	412.5	443.7	+7.6
All other departments					
Total, all departments	8,534.4	9,366.8	10,218.1	10,208.1	-0.1

### 17.5 Retail sales of new motor vehicles, 1973-82

Year	Passenger cars		Trucks and buses		Total	
	No.	\$'000	No.	\$'000	No.	\$'000
1973	970,828	3,835,173	255,870	1,535,201	1,226,698	5,370,374
1974	942,797	4,016,879	306,507	1,900,106	1,249,304	5,916,985
1975	989,280	5,018,402	327,349	2,242,606	1,316,629	7,261,008
1976	946,488	5,241,970	344,975	2,512,118	1,291,463	7,754,088
1977	991,398	5,795,552	353,561	2,750,341	1,344,959	8,545,893
1978	988,890	6,383,020	377,654	3,266,505	1,366,544	9,649,525
1979	1,003,008	7,344,174	393,394	4,137,808	1,396,402	11,481,982
1980	932,060	7,517,901	331,747	3,860,703	1,263,807	11,378,604
1981	904,195	8,272,529	286,687	3,645,866	1,190,882	11,918,395
1982	713,481	7,037,564	207,421	2,786,407	920,902	9,823,971

### 17.6 Retail sales of new motor vehicles by type and source, 1973-82

Year	Passenger cars		Trucks and buses		Total	
	Canadian/US	Overseas	Canadian/US	Overseas	Canadian/US	Overseas
	Number					
1973	782,914	187,914	235,449	20,421	1,018,363	208,335
1974	796,840	145,957	287,686	18,821	1,084,526	164,778
1975	835,679	153,601	310,590	16,759	1,146,269	170,360
1976	793,201	153,287	331,027	13,948	1,124,228	167,235
1977	797,752	193,646	337,914	15,647	1,135,666	209,293
1978	815,994	172,896	364,241	13,413	1,180,235	186,309
1979	863,554	139,454	381,562	11,832	1,245,116	151,286
1980	740,767	191,293	310,273	21,474	1,051,040	212,767
1981	646,942	257,253	250,775	35,912	897,717	293,165
1982	489,435	224,046	166,986	40,435	656,421	264,481
	Thousand dollars					
1973	3,197,173	638,000	1,466,448	68,753	4,663,621	706,753
1974	3,455,140	561,739	1,831,532	68,574	5,286,672	630,313
1975	4,350,220	668,182	2,174,855	67,751	6,525,075	735,933
1976	4,522,723	719,247	2,447,109	65,009	6,969,832	784,256
1977	4,864,157	931,395	2,673,007	77,264	7,537,234	1,008,659
1978	5,381,914	1,001,106	3,188,109	78,396	8,570,023	1,079,502
1979	6,355,127	989,047	4,053,773	84,035	10,408,900	1,073,082
1980	6,069,407	1,448,494	3,698,247	162,456	9,767,654	1,610,950
1981	6,033,437	2,239,092	3,334,406	311,460	9,367,843	2,550,552
1982	4,856,340	2,181,224	2,423,014	363,393	7,279,354	2,544,617

### 17.7 Retail sales in campus book stores, academic years, 1979-80 to 1982-83

Province and items sold	1979-80 \$'000	1980-81 \$'000	1981-82 \$'000	1982-83 \$'000	Percentage change 1981-82 to 1982-83
Province					
Atlantic region	7,470	8,663	9,858	11,844	+20.1
Nova Scotia	3,170	3,975	4,392	5,419	+23.4
New Brunswick	2,311	2,585	3,004	3,531	+13.4

**17.7 Retail sales in campus book stores, academic years, 1979-80 to 1982-83 (concluded)**

Province and items sold	1979-80 \$'000	1980-81 \$'000	1981-82 \$'000	1982-83 \$'000	Percentage change 1981-82 to 1982-83
Quebec	22,859	29,156	31,144	34,780	+ 11.7
Ontario	50,400	58,788	68,066	80,054	+ 17.6
Manitoba	5,647	6,265	7,510	9,186	+ 22.3
Saskatchewan	4,732	5,652	5,990	7,818	+ 30.5
Alberta	12,391	14,483	17,371	21,527	+ 23.9
British Columbia	12,803	15,342	17,718	20,105	+ 13.5
<b>Total</b>	<b>116,301</b>	<b>138,349</b>	<b>157,658</b>	<b>185,314</b>	<b>+ 17.5</b>
<b>Items sold</b>					
Textbooks <sup>1</sup>	74,433	89,226	102,456	122,929	+ 20.0
Trade books <sup>2</sup>	11,746	12,942	14,075	16,640	+ 18.2
Stationery and supplies	18,027	22,077	24,151	26,789	+ 10.9
Miscellaneous <sup>3</sup>	12,095	14,104	16,976	18,956	+ 11.7

<sup>1</sup>Includes all professional and educational books.<sup>2</sup>Includes hard covers and paperbacks.<sup>3</sup>Includes newspapers, magazines, periodicals and sundries.**17.8 Vending machine operators, 1972-82**

Year	Firms No.	Annual change %	Machines <sup>1</sup> No.	Annual change %	Sales \$'000	Annual change %
1972 <sup>2</sup>	692	- 0.7	106,758	+ 9.0	178,909	+ 10.3
1973	648	- 6.4	104,253	- 2.3	207,081	+ 15.7
1974	667	+ 2.9	106,278	+ 1.9	227,445	+ 9.8
1975	627	- 6.0	110,287	+ 3.8	249,960	+ 9.9
1976	612	- 2.4	104,548	- 5.2	269,387	+ 7.8
1977	622	+ 1.6	105,587	+ 1.0	286,478	+ 6.3
1978	630	+ 1.3	112,531	+ 6.6	296,927	+ 3.6
1979	585	- 7.1	116,638	+ 3.6	329,250	+ 10.9
1980	584	- 0.2	119,316	+ 2.3	371,781	+ 12.9
1981	643	+ 10.1	122,121	+ 2.4	380,121	+ 2.2
1982	701	+ 9.0	122,598	+ 0.4	363,312	- 4.4

<sup>1</sup>Maximum during the year; ovens, coin and bill changers are excluded.<sup>2</sup>Beginning 1972, data of small operators excluded.**17.9 Sales through vending machines, distribution and percentage change, by selected type of machine, 1979-82**

Type of machine	1979		1980		Percentage change 1979-80
	\$'000	%	\$'000	%	
Cigarettes	136,547.8	41.5	140,670.4	37.8	+ 3.0
Beverages					
Coffee	62,438.0	19.0	76,374.4	20.5	+ 22.3
Soft drinks					
Can or bottle	31,363.7	9.5	35,374.5	9.5	+ 12.8
Disposable cups	20,623.1	6.3	22,472.9	6.0	+ 9.0
Packaged milk	12,608.5	3.8	14,756.0	4.0	+ 17.0
Other beverages	631.9	0.2	1,229.4	0.3	+ 94.6
Confections and foods					
Bulk confectionery	4,072.8	1.2	5,748.0	1.6	+ 41.1
Packaged confectionery	19,752.0	6.0	25,049.0	6.7	+ 26.8
Pastries	5,985.8	1.8	9,162.7	2.5	+ 53.1
Snack food	7,898.8	2.4	6,647.4	1.8	- 15.8
Hot canned foods and soups	4,591.3	1.4	4,705.1	1.3	+ 2.5
Ice cream	970.9	0.3	1,296.5	0.3	+ 33.5
Fresh food (casseroles, hot dogs, sandwiches, salads)	20,147.5	6.1	26,069.7	7.0	+ 29.4
Other vending machines for food	810.0	0.2	1,204.8	0.3	+ 48.7
All other food and non-food	807.9	0.2	1,020.5	0.3	+ 26.3
<b>Total</b>	<b>329,250.0</b>	<b>100.0</b>	<b>371,781.4</b>	<b>100.0</b>	<b>+ 12.9</b>

### 17.9 Sales through vending machines, distribution and percentage change, by selected type of machine, 1979-82 (concluded)

Type of machine	1981		1982		Percentage change 1981-82
	\$'000	%	\$'000	%	
Cigarettes	142,244.2	37.4	135,578.4	37.3	-4.7
Beverages					
Coffee	69,560.7	18.3	64,995.2	17.9	-6.6
Soft drinks					
Can or bottle	43,163.3	11.4	50,049.4	13.8	+16.0
Disposable cups	20,058.2	5.3	15,890.0	4.4	-20.8
Packaged milk	12,301.1	3.2	9,793.7	2.7	-20.4
Other beverages	9,321.1	2.5	8,815.7	2.4	-5.4
Confections and foods					
Bulk confectionery	4,012.5	1.1	2,946.8	0.8	-26.6
Packaged confectionery	34,563.5	9.1	33,551.0	9.2	-2.9
Pastries	9,358.8	2.5	7,681.3	2.1	-17.9
Snack food	5,229.9	1.4	7,687.9	2.1	+47.0
Hot canned foods and soups	4,324.0	1.1	4,315.7	1.2	-0.2
Ice cream	1,901.9	0.5	1,047.1	0.3	-44.9
Fresh food (casseroles, hot dogs, sandwiches, salads)	23,338.1	6.1	20,406.6	5.6	-12.6
Other vending machines for food	367.5	0.1	282.8	0.1	-23.0
All other food and non-food	375.9	0.1	270.9	0.1	-27.9
Total	380,120.7	100.0	363,312.4	100.0	-4.4

### 17.10 Direct sales by commodity

Commodity	1978 \$'000	1979 \$'000	1980 \$'000	1981 \$'000	Percentage change 1980-81
Meat, fish and poultry	21,104	21,260	26,292	26,646	+1.3
Frozen food plans	14,786	18,704	21,924	25,794	+17.7
Dairy products	242,000	243,338	258,601	313,952	+21.4
Bakery products	82,000	89,445	171,538	205,098	+19.6
All other foods and beverages	58,629	69,564	85,030	85,681	+0.8
Canvas, awnings, sails and tents	5,974	7,164	8,031	8,892	+10.7
Clothing	18,374	21,778	32,588	35,845	+10.0
Fur goods	14,096	12,770	15,468	19,193	+24.1
Furniture, re-upholstery and repairs	64,668	80,657	94,228	112,013	+18.9
Books	152,290	153,302	169,467	189,553	+11.9
Newspapers	204,000	206,067	255,290	286,902	+12.4
Magazines	34,514	41,432	47,002	53,195	+13.2
Aluminum windows, doors, screens and awnings	37,607	34,349	51,149	62,593	+22.4
Dinnerware, kitchenware and utensils	109,896	117,882	116,848	115,384	-1.3
Sailboats and pleasure craft	10,822	11,347	12,534	14,053	+12.1
Household electrical appliances	157,494	186,043	165,601	169,529	+2.4
General merchandise <sup>1</sup>	20,333	26,375	44,805	44,694	-0.2
Brushes, brooms, mops and household soaps and cleaners	53,233	84,065	116,611	116,048	-0.5
Cosmetics and costume jewellery	185,943	202,928	216,360	272,739	+26.1
Phonograph records	13,172	15,710	17,450	20,267	+16.1
Greenhouse flowers, nursery seeds and stocks	78,563	76,316	84,118	97,594	+16.0
Toys, games, hobbies, crafts and cards			48,608	62,918	+29.4
Miscellaneous <sup>2</sup>	162,197	170,549	119,362	315,621	+164.4
Total, all commodities	1,741,695	1,893,045	2,178,905	2,654,204	+21.8

<sup>1</sup>Includes books, binoculars, cameras, jewellery, tools, etc., sold to holders of credit cards issued by gasoline oil companies and other credit-card companies.

<sup>2</sup>Includes leather goods, textiles, stamps, coins and personal stationery, pharmaceuticals and medicines.

### 17.11 Methods of distribution of direct sales, 1981 and 1982

Commodity	From premises %	By mail %	Home delivery %	Personal selling %	Through other channels <sup>1</sup> %	Total direct sales \$'000
1981						
Meat, fish and poultry	96.4	—	—	—	3.6	26,646
Frozen food plans	32.5	—	—	67.5	—	25,794
Dairy products	14.1	0.1	85.7	—	0.1	313,952
Bakery products	75.0	0.4	23.3	—	1.3	205,098
All other foods and beverages	4.2	—	30.6	23.3	41.8	85,681
Canvas, awnings, sails and tents	100.0	—	—	—	—	8,892
1982						

**17.11 Methods of distribution of direct sales, 1981 and 1982 (concluded)**

Commodity	From premises %	By mail %	Home delivery %	Personal selling %	Through other channels <sup>1</sup> %	Total direct sales \$'000
Clothing and shoes	31.0	23.0	0.9	45.1	—	35,845
Fur goods	100.0	—	—	—	—	18,623
Furniture, re-upholstery and repairs	100.0	—	—	—	—	112,013
Books	0.8	78.5	—	20.7	—	189,553
Newspapers	0.8	8.4	80.9	—	9.9	286,902
Magazines	—	100.0	—	—	—	53,195
Home improvement products	42.6	3.0	—	53.7	0.7	62,593
Dinnerware, kitchenware and utensils	5.3	7.1	—	87.6	—	115,384
Sailboats and pleasure craft	98.1	—	—	—	1.9	14,053
Household electrical appliances	21.5	—	—	78.5	—	169,529
Household cleaners, soaps, brushes, brooms and mops	0.6	—	—	99.4	—	116,048
Cosmetics and personal care products	0.1	—	—	99.9	—	204,529
Costume jewellery	13.9	1.0	—	85.1	—	68,210
Phonograph records and tapes	—	100.0	—	—	—	20,267
Greenhouse flowers, nursery seeds and stocks	23.7	10.8	—	—	65.5	97,594
General merchandise	—	100.0	—	—	—	44,694
Toys, games, hobbies, crafts and cards	4.4	42.2	—	53.4	—	62,918
Miscellaneous	41.3	36.0	—	22.7	—	144,592
<b>Total, all commodities</b>	<b>22.9</b>	<b>16.1</b>	<b>24.5</b>	<b>31.1</b>	<b>5.3</b>	<b>2,482,605</b>
<b>1982</b>						
Meat, fish and poultry	94.5	—	—	—	5.5	26,878
Frozen food plans	16.1	—	—	83.9	—	17,706
Dairy products	24.1	—	75.8	—	0.1	297,369
Bakery products	74.1	—	20.3	—	5.6	231,282
All other foods and beverages	8.2	0.2	21.0	35.2	35.4	111,011
Canvas, awnings, sails and tents	74.4	—	—	25.6	—	12,023
Clothing and shoes	33.4	14.5	—	52.2	—	31,877
Fur goods	100.0	—	—	—	—	18,798
Furniture, re-upholstery and repairs	100.0	—	—	—	—	122,075
Books	—	79.6	—	20.4	—	189,831
Newspapers	0.7	10.6	80.2	—	8.5	299,606
Magazines	—	100.0	—	—	—	75,220
Home improvement products	58.3	—	37.6	3.9	0.3	57,731
Dinnerware, kitchenware and utensils	1.1	7.6	—	91.3	—	114,024
Sailboats and pleasure craft	100.0	—	—	—	—	12,770
Household electrical appliances	18.5	1.5	—	80.0	—	151,729
Household cleaners, soaps, brushes, brooms and mops	1.7	—	—	98.3	—	112,781
Cosmetics and personal care products	0.1	—	—	99.9	—	217,186
Costume jewellery	3.4	2.3	—	94.3	—	44,818
Phonograph records and tapes	—	100.0	—	—	—	21,233
Greenhouse flowers, nursery seeds and stocks	25.7	12.0	—	—	62.3	96,686
General merchandise	—	100.0	—	—	—	27,136
Toys, games, hobbies, crafts and cards	3.0	68.6	—	28.4	—	61,788
Miscellaneous	24.7	51.9	9.6	12.5	1.4	169,673
<b>Total, all commodities</b>	<b>23.4</b>	<b>18.5</b>	<b>22.8</b>	<b>29.7</b>	<b>5.6</b>	<b>2,521,231</b>

<sup>1</sup>Includes roadside stands, market stalls, dining facilities on airlines, ferries and railways, kiosks, off-premises' shows, exhibitions and other display and demonstration venues.

**17.12 Summary statistics of major traveller accommodation groups, 1978-82**

Year and accommodation group	Locations No.	Rooms No.	Cabins and cottages No.	Tent trailer spaces No.	Total receipts \$'000
<b>1978</b>					
Hotels	5,197	201,478	3,087	2,748	2,947,739
Motels	4,102	78,252	3,193	5,301	425,577
Tourist homes	345	2,467	46	31	4,644
Tourist courts and cabins	2,443	902	20,364	5,587	57,552
Outfitters	1,602	1,809	11,025	8,089	73,444
Tent and trailer campgrounds	3,239	627	3,803	308,718	125,190
<b>Total</b>	<b>16,928</b>	<b>285,535</b>	<b>41,518</b>	<b>330,474</b>	<b>3,634,146</b>

### 17.12 Summary statistics of major traveller accommodation groups, 1978-82 (concluded)

Year and accommodation group	Locations No.	Rooms No.	Cabins and cottages No.	Tent trailer spaces No.	Total receipts \$'000
1979					
Hotels	5,002	199,625	3,021	3,503	3,279,307
Motels	4,049	78,705	3,035	4,596	471,493
Tourist homes	316	2,291	63	4	4,417
Tourist courts and cabins	2,153	700	18,490	5,445	58,337
Outfitters	1,578	1,292	11,382	7,664	85,130
Tent and trailer campgrounds	3,163	807	4,154	310,917	145,487
Total	16,261	283,420	40,145	332,129	4,044,171
1980					
Hotels	4,814	201,982	3,001	2,839	3,711,175
Motels	3,945	77,450	2,888	5,306	514,436
Tourist homes	279	1,988	58	14	4,763
Tourist courts and cabins	2,005	637	17,275	5,133	58,020
Outfitters	1,554	1,299	11,285	7,245	98,919
Tent and trailer campgrounds	3,143	980	3,821	309,169	156,757
Total	15,740	284,348	38,328	329,706	4,544,070
1981					
Hotels	4,520	200,959	3,062	3,092	4,151,161
Motels	3,904	78,573	2,641	4,731	610,780
Tourist homes	261	1,821	59	45	5,200
Tourist courts and cabins	1,992	670	17,380	5,093	70,837
Outfitters	1,393	1,031	10,164	6,644	100,042
Tent and trailer campgrounds	2,975	1,037	3,652	310,407	168,981
Total	15,045	284,091	36,958	330,012	5,107,001
1982					
Hotels	4,295	204,607	3,150	2,614	4,332,281
Motels	3,844	78,501	2,551	4,906	603,961
Tourist homes	244	1,745	50	55	5,400
Tourist courts and cabins	2,030	658	17,576	5,674	75,369
Outfitters	1,359	984	10,192	6,323	104,102
Tent and trailer campgrounds	2,968	611	3,806	310,008	183,085
Total	14,740	287,106	37,325	329,580	5,304,198

### 17.13 Locations and receipts of major traveller accommodation groups, by province, 1978-82

Year and province or territory	Hotels		Motels		Total receipts <sup>1</sup>	
	Locations No.	Receipts \$'000	Locations No.	Receipts \$'000	\$'000	% distribution
1978						
Newfoundland	87	36,376	35	7,096	46,842	1.3
Prince Edward Island	24	8,458	59	3,725	15,375	0.4
Nova Scotia	92	51,911	162	17,936	74,996	2.0
New Brunswick	75	39,083	171	17,744	61,203	1.7
Quebec	1,738	588,546	715	76,477	712,279	19.6
Ontario	1,255	892,646	1,449	132,129	1,136,706	31.3
Manitoba	278	171,170	116	11,625	195,885	5.4
Saskatchewan	478	171,079	158	21,211	206,862	5.7
Alberta	499	449,660	347	54,641	515,730	14.2
British Columbia	613	503,515	856	77,588	612,783	16.9
Yukon	36	18,598	22	2	22,176	0.6
Northwest Territories	22	14,697	12	2	21,924	0.6
Canada	5,197	2,947,739	4,102	425,577	3,634,146	100.0
1979						
Newfoundland	81	38,573	43	8,737	50,723	1.3
Prince Edward Island	24	8,674	57	4,558	16,770	0.4
Nova Scotia	87	59,374	160	19,641	84,493	2.1
New Brunswick	74	39,081	170	20,872	64,749	1.6
Quebec	1,659	649,377	724	79,818	784,814	19.4
Ontario	1,198	975,740	1,402	136,960	1,237,658	30.6
Manitoba	279	194,222	107	12,796	219,982	5.4
Saskatchewan	459	190,964	157	21,785	227,798	5.6
Alberta	497	526,166	356	68,609	605,041	15.0

### 17.13 Locations and receipts of major traveller accommodation groups, by province, 1978-82 (concluded)

Year and province or territory	Hotels		Motels		Total receipts <sup>1</sup>	
	Locations No.	Receipts \$'000	Locations No.	Receipts \$'000	\$'000	% distri- bution
British Columbia	582	557,816	845	93,581	690,302	17.1
Yukon	40	22,161	20	2,426	25,395	0.6
Northwest Territories	22	17,159	8	1,710	23,894	0.6
Canada	5,002	3,279,307	4,049	471,493	4,044,171	100.0
1980						
Newfoundland	83	45,941	42	8,561	54,502	1.3
Prince Edward Island	22	9,931	60	5,043	14,974	0.4
Nova Scotia	86	64,038	155	20,920	84,958	2.0
New Brunswick	73	48,077	159	17,170	65,247	1.5
Quebec	1,527	702,001	711	86,787	788,788	18.7
Ontario	1,147	1,066,958	1,362	146,521	1,213,479	28.7
Manitoba	278	218,425	102	14,261	232,686	5.5
Saskatchewan	450	215,269	155	20,575	235,844	5.6
Alberta	512	617,720	354	82,751	700,471	16.6
British Columbia	581	680,487	817	106,265	786,752	18.6
Yukon	35	24,003	20	3,964	27,967	0.6
Northwest Territories	20	18,325	8	1,618	19,943	0.5
Canada	4,814	3,711,175	3,945	514,436	4,225,611	100.0
1981						
Newfoundland	79	49,715	42	7,288	57,003	1.2
Prince Edward Island	25	11,077	55	6,209	17,286	0.4
Nova Scotia	83	69,962	153	24,647	94,609	2.0
New Brunswick	63	46,874	163	24,639	71,513	1.5
Quebec	1,271	744,814	709	99,059	843,873	17.7
Ontario	1,103	1,189,550	1,346	191,641	1,381,191	29.0
Manitoba	274	237,961	103	17,943	255,904	5.4
Saskatchewan	460	235,880	160	22,449	258,329	5.4
Alberta	529	747,499	349	90,578	838,077	17.6
British Columbia	582	770,588	799	120,498	891,086	18.7
Yukon	32	27,853	17	2	2	0.2
Northwest Territories	19	19,388	8	2	2	0.2
Canada	4,520	4,151,161	3,904	610,780	4,761,941	100.0
1982						
Newfoundland	75	51,790	37	6,720	58,510	1.2
Prince Edward Island	25	12,864	56	5,600	18,464	0.4
Nova Scotia	79	77,338	148	25,891	103,229	2.1
New Brunswick	66	54,882	158	24,126	79,008	1.6
Quebec	1,096	735,070	685	97,183	832,253	16.8
Ontario	1,047	1,248,704	1,331	189,335	1,438,039	29.1
Manitoba	266	281,180	103	18,755	299,935	6.1
Saskatchewan	457	255,586	162	27,813	283,399	5.7
Alberta	550	786,865	349	86,110	872,975	17.7
British Columbia	580	768,793	787	114,995	883,788	17.9
Yukon	31	33,127	19	5,565	38,692	0.8
Northwest Territories	23	26,082	9	1,868	27,950	0.6
Canada	4,295	4,332,281	3,844	603,961	4,936,242	100.0

<sup>1</sup>Includes tourist homes, tourist courts and cabins, outfitters, and tent and trailer campgrounds; components will not add to totals because no provincial revenue distribution is available for federal campgrounds.

<sup>2</sup>Confidential.

### 17.14 Restaurant, caterer and tavern receipts, by province, selected years (thousand dollars)

Province or territory	1978	1979	1981	1982	1983
Newfoundland	112.1	121.2	135.1	136.6	140.7
Prince Edward Island	26.2	28.2	36.3	36.3	41.6
Nova Scotia	17.8	192.8	256.4	257.1	272.0
New Brunswick	141.2	149.9	167.3	186.9	187.2
Quebec	1,843.6	2,015.6	2,199.3	2,188.9	2,390.1
Ontario	2,509.1	2,771.1	3,476.4	3,827.7	3,969.4
Manitoba	267.7	290.2	288.8	312.4	333.2
Saskatchewan	208.2	222.1	273.1	321.9	335.2
Alberta	640.8	704.5	940.1	1,056.3	1,049.6
British Columbia	904.6	1,006.7	1,289.7	1,233.4	1,351.1
Yukon and Northwest Territories	16.0	17.3	29.0	18.9	19.8
Canada	6,847.3	7,519.6	9,091.5	9,576.6	10,089.9

### 17.15 Wholesale merchant establishments, volume of trade<sup>1</sup> by province, selected years

Province	1973 \$'000,000	1975 \$'000,000	1977 \$'000,000	1979 \$'000,000	1981 \$'000,000
Newfoundland	408.2	687.2	677.1	846.1	1,081.7
Prince Edward Island	87.7	113.8	135.5	181.9	230.0
Nova Scotia	609.3	849.3	961.2	1,282.4	1,660.4
New Brunswick	491.1	739.6	1,405.8	2,847.6	3,420.1
Quebec	10,826.9	14,365.8	16,275.6	25,241.3	29,002.4
Ontario	13,796.5	24,147.8	28,117.9	42,748.0	57,954.6
Manitoba	5,648.2	7,500.3	7,969.3	11,533.7	15,650.8
Saskatchewan	1,004.0	1,860.3	2,160.9	3,657.1	6,405.5
Alberta	2,388.3	3,648.7	4,844.9	9,103.2	15,276.1
British Columbia <sup>2</sup>	4,458.4	5,820.2	8,033.0	12,192.4	17,238.5

<sup>1</sup>Sales and trading receipts, and the value of goods bought or sold on commission.

<sup>2</sup>Includes Yukon and Northwest Territories.

### 17.16 Wholesale merchant establishments, volume of trade<sup>1</sup> by trade groups, selected years

S.I.C. trade groups	1973 \$'000,000	1975 \$'000,000	1977 \$'000,000	1979 \$'000,000	1981 \$'000,000
Farm products	4,901.8	6,089.2	6,200.2	9,988.2	19,312.7
Coal and coke	38.0	48.0	17.8	36.4	50.9
Petroleum products	4,428.8	9,171.2	10,043.0	15,081.4	23,670.7
Paper and paper products	754.8	1,142.1	1,153.0	2,183.7	2,661.5
General merchandise	896.1	1,712.0	3,552.9	284.4	312.3
Food	6,200.6	9,332.2	11,611.9	16,512.5	21,194.8
Tobacco products	784.7	915.9	1,081.2	1,442.3	2
Drugs and toilet preparations	480.2	695.0	819.2	1,266.9	1,652.1
Apparel and dry goods	1,008.0	1,315.1	1,539.2	2,083.8	2,184.0
Household furniture and house furnishings	671.0	812.1	1,040.2	1,311.3	1,762.9
Motor vehicles and accessories	2,910.0	4,262.3	5,037.4	7,931.3	9,821.6
Electrical machinery, equipment and supplies	1,490.1	2,641.3	3,037.1	4,941.2	6,617.9
Farm machinery	1,402.7	2,466.0	2,632.3	4,729.2	5,649.1
Machinery and equipment	4,228.4	6,591.3	7,539.0	12,150.4	14,874.9
Hardware, plumbing and heating equipment	1,471.1	2,217.6	2,531.7	3,592.5	4,243.2
Metals and metal products	1,364.4	1,512.7	1,470.1	4,486.2	
Lumber and building materials	4,121.6	4,994.3	6,477.4	10,165.2	10,003.3
Scrap and waste materials	333.3	409.1	465.1	1,101.8	1,160.1
Wholesalers, n.e.s.	2,232.9	3,405.7	4,333.8	10,344.9	14,957.6
Total, all trades	39,718.6	59,733.1	70,582.4	109,633.7	147,920.1

<sup>1</sup>Sales and trading receipts, and the value of goods bought or sold on commission.

<sup>2</sup>Confidential.

### 17.17 Agents and brokers, volume of trade<sup>1</sup> by trade groups and province

Province and S.I.C. trade groups	1978 \$'000,000	1980 \$'000,000	Percentage change	1981 \$'000,000	Percentage change
			1978-80		1980-81
Newfoundland	134.0	213.5 <sub>3</sub>	+ 59.3	228.4	+ 7.0
Prince Edward Island	14.8	...	...	55.0	...
Nova Scotia	236.2	483.0	+ 104.5	530.3	+ 9.8
New Brunswick	148.4	241.0	+ 62.4	285.2	+ 18.3
Quebec	2,183.3	4,138.5	+ 89.6	6,037.3	+ 45.9
Ontario	5,533.7	9,158.2 <sub>3</sub>	+ 65.5	9,796.8	+ 7.0
Manitoba	4,168.7	...	...	6,165.4	...
Saskatchewan	831.4	1,140.8	+ 37.2	691.8	- 39.4
Alberta	1,462.0	2,013.6	+ 37.8	2,396.1	+ 19.0
British Columbia <sup>2</sup>	1,573.0	4,379.3	+ 178.4	2,746.2	- 37.3
Farm products	5,747.0	10,649.9	+ 85.3	10,524.0	- 1.2
Coal and coke	—	—	—	13.9	—
Petroleum products	2,136.1	3,463.2	+ 62.1	3,726.7	+ 7.6
Paper and paper products	138.9	515.2	+ 273.1	402.2	- 21.9
General merchandise	...	17.8	...	72.6	+ 307.9
Food	1,661.5 <sub>3</sub>	4,049.7 <sub>3</sub>	+ 143.7	2,728.1 <sub>1</sub>	- 32.6
Tobacco products	...	...	...	...	...
Drugs and toilet preparations	21.9	48.8	+ 122.8	70.5	+ 44.5
Apparel and dry goods	1,058.3	1,673.7	+ 58.1	1,927.4	+ 15.2
Household furniture and house furnishings	206.4	381.6	+ 84.9	543.4	+ 42.4

**17.17 Agents and brokers, volume of trade<sup>1</sup> by trade groups and province (concluded)**

Province and S.I.C. trade groups	1978 \$'000,000	1980 \$'000,000	Percentage change	1981 \$'000,000	Percentage change
			1978-80		1980-81
Motor vehicles and accessories	275.1	576.2	+ 109.5	448.1	- 22.2
Electrical machinery, equipment and supplies	403.4	660.4	+ 63.7	823.7	+ 24.7
Farm machinery, equipment and supplies	20.3	49.5	+ 143.8	51.3	+ 23.6
Machinery and equipment	340.5	519.2	+ 52.5	650.6	+ 25.3
Hardware, plumbing and heating equipment	255.5	491.2	+ 92.2	752.3	+ 53.2
Metals and metal products	3	3	...	...	...
Lumber and building materials	362.3	1,151.0	+ 217.7	526.6	- 54.2
Scrap and waste materials	3	39.3	...	15.4	- 60.8
Wholesalers, n.e.s.	721.5	1,165.2	+ 61.5	2,130.8	+ 82.8
Total, all trades	16,285.4	29,635.4	+ 82.0	28,932.6	- 2.4

<sup>1</sup>Sales and trading receipts including value of goods bought or sold on commission.<sup>2</sup>Includes Yukon and Northwest Territories.<sup>3</sup>Confidential.**17.18 Agents and brokers, gross commissions earned by trade groups and province**

Province and S.I.C. trade groups	1978 \$'000,000	1980 \$'000,000	Percentage change	1981 \$'000,000	Percentage change
			1978-80		1980-81
Newfoundland	8.5	13.8	+ 62.4	11.8	- 14.5
Prince Edward Island	1.1	—	...	...	...
Nova Scotia	13.7	25.5	+ 86.1	20.9	- 18.0
New Brunswick	10.1	15.2	+ 50.5	14.1	- 7.2
Quebec	115.6	171.4	+ 48.3	178.1	+ 3.9
Ontario	135.3	217.6	+ 60.8	246.8	+ 13.4
Manitoba	31.2	1	...	66.3	...
Saskatchewan	24.8	47.5	+ 91.5	1	...
Alberta	56.1	80.4	+ 43.3	1	...
British Columbia <sup>2</sup>	67.5	110.2	+ 63.3	105.5	- 4.3
Farm products	1	62.8	...	112.0	+ 78.3
Coal and coke	—	—	...	1	...
Petroleum products	140.1	206.2	+ 47.2	214.7	+ 4.1
Paper and paper products	2.5	10.2	+ 308.0	8.0	- 21.6
General merchandise	1	0.8	...	1	...
Food	63.1	93.9	+ 48.8	75.0	- 20.1
Tobacco products	1	1	...	1	...
Drugs and toilet preparations	1.7	4.6	+ 170.6	1	...
Apparel and dry goods	56.4	78.6	+ 39.1	85.1	+ 8.3
Household furniture and house furnishings	11.5	19.2	+ 67.0	24.8	+ 29.2
Motor vehicles and accessories	12.7	24.7	+ 94.5	24.8	—
Electrical machinery, equipment and supplies	21.6	35.3	+ 63.4	44.8	+ 26.9
Farm machinery, equipment and supplies	1.6	3.2	+ 100.0	1.7	- 46.9
Machinery and equipment	20.8	34.2	+ 64.4	34.3	—
Hardware, plumbing and heating equipment	13.4	28.4	+ 111.9	24.0	- 15.5
Metals and metal products	1	1	...	1	...
Lumber and building materials	11.5	28.8	+ 150.4	13.7	- 52.8
Scrap and waste materials	1	1.4	...	1	- 42.9
Wholesalers, n.e.s.	45.7	76.4	+ 67.2	82.9	+ 8.5
Total, all trades	463.9	728.7	+ 57.1	775.1	+ 6.4

<sup>1</sup>Confidential.<sup>2</sup>Includes Yukon and Northwest Territories.**17.19 Summary statistics of co-operative associations, 1975-81, and by region, 1978-81**

Year and region	Associations	Shareholders or members	Assets \$'000,000	Product farm marketings \$'000,000	Sales of merchandise and supplies \$'000,000	Service revenue \$'000,000	Total business <sup>1</sup> \$'000,000
1975	2,391	2,109,000	2,343.2	3,446.4	1,921.2	126.3	5,542.0
1976	2,518	2,290,000	2,597.0	3,839.4	2,173.2	151.8	6,213.3
1977	2,489	2,373,000	2,657.1	4,327.2	2,423.1	341.4	7,150.5
1978	2,498	2,499,000	3,063.6	4,612.9	2,697.9	402.5	7,783.3
1979	2,611	2,702,900	3,669.3	5,185.3	3,214.6	434.0	8,926.0
1980	2,677	2,748,100	4,150.8	6,606.0	3,742.4	567.7	11,036.0
1981	2,871	2,794,100	5,366.2	7,577.0	4,483.0	625.0	12,836.0

### 17.19 Summary statistics of co-operative associations, 1975-81, and by region, 1978-81 (concluded)

Year and region	Associations	Shareholders or members	Assets \$'000,000	Product farm marketings \$'000,000	Sales of merchandise and supplies \$'000,000	Service revenue \$'000,000	Total business <sup>1</sup> \$'000,000	
Atlantic <sup>2</sup>	1978	292	108,400	129.0	177.8	225.8	7.3	414.6
	1979	302	113,100	145.6	229.6	258.2	8.0	501.4
	1980	297	111,000	160.8	262.9	286.3	9.2	564.9
	1981	300	115,700	184.3	299.0	325.7	9.4	644.6
Quebec	1978	629	346,600	478.7	722.9	569.6	28.1	1,338.3
	1979	670	401,300	580.2	784.4	665.2	31.7	1,501.4
	1980	708	427,100	671.8	963.4	810.1	38.5	1,840.6
	1981	785	428,100	796.6	1,136.2	945.6	46.3	2,161.8
Ontario	1978	180	234,200	228.0	232.0	333.9	23.2	593.5
	1979	193	233,700	281.9	258.7	386.6	25.8	676.9
	1980	208	232,700	331.8	303.5	436.3	35.2	782.7
	1981	228	135,900	373.0	342.9	507.1	30.4	891.5
West <sup>3</sup>	1978	1,397	1,810,000	2,228.0	3,480.1	1,568.6	343.9	5,436.8
	1979	1,446	1,954,800	2,661.6	3,912.6	1,904.6	368.6	6,246.2
	1980	1,464	1,977,400	2,986.3	5,076.6	2,209.8	484.8	7,847.7
	1981	1,558	2,114,300	4,012.4	5,796.8	2,703.1	538.9	9,134.5

<sup>1</sup>Includes other income.<sup>2</sup>Includes Nfld., PEI, NS, NB.<sup>3</sup>Includes Man., Sask., Alta., BC.

### 17.20 Sales of products handled by marketing and purchasing co-operatives (million dollars<sup>1</sup>)

Product marketing	1978	1979	1980	1981
Grains	2,219	2,061	2,995	3,721
Oilseeds	303	546	694	745
Fruit	74	84	88	85
Vegetables	45	51	58	77
Dairy products	1,184	1,283	1,580	1,819
Poultry	127	169	180	203
Eggs	15	15	17	18
Livestock:				
Cattle and sheep	435	701	678	541
Hogs	72	101	108	126
Fish	77	93	123	138
Forest products	22	34	39	49
Honey and maple products	18	20	23	23
Other	24	28	25	32
Total	4,613	5,185	6,606	7,577
Merchandise and supplies				
Food products	816	942	1,101	1,313
Dry goods and home hardware	185	220	247	283
Other consumer goods	41	60	69	82
Total consumer	1,041	1,221	1,418	1,678
Animal feed	400	502	591	669
Fertilizer and chemicals	268	332	402	496
Feeds	67	72	77	82
Farm supplies	159	191	208	214
Total agriculture	893	1,097	1,277	1,461
Machinery, vehicles and parts	144	178	195	219
Petroleum products	438	507	612	870
Building materials	164	199	225	241
Other	18	13	15	14
Total	2,698	3,215	3,742	4,483

<sup>1</sup>Rounded to nearest million.

17.21 Value and volume of sales of alcoholic beverages, years ended Mar. 31, 1979-82

Province or territory	1979	1980	1981	1982	1979	1980	1981	1982
Value (\$'000,000)								
Spirits								
Nfld.	42.5	46.0	49.7	55.5	5.4	6.3	7.8	8.9
PEI	12.0	13.2	13.8	15.5	1.7	2.1	2.3	2.7
NS	76.5	83.1	91.9	100.5	14.9	16.8	19.3	21.6
NB	47.7	50.9	54.2	59.0	9.5	10.6	11.8	13.7
Que.	358.4	313.4	386.3	406.1	219.6	228.3	287.8	317.4
Ont.	729.1	788.5	837.9	936.8	232.6	266.0	315.2	351.2
Man.	98.6	100.9	112.3	127.1	19.7	21.8	26.3	29.7
Sask.	88.1	91.1	98.9	115.1	13.1	14.4	16.2	20.1
Alta.	249.7	277.5	267.5	365.2	58.4	71.2	72.2	103.0
BC	299.8	315.7	388.9	418.3	109.0	121.7	160.2	183.2
YT	4.8	5.0	6.1	6.7	1.5	1.6	2.1	2.3
NWT	6.6	6.8	7.7	9.1	1.3	1.4	1.6	1.9
Canada	2,013.8	2,092.1	2,315.3	2,615.1	686.9	762.2	922.7	1,055.6
Beer								
Nfld.	62.9	70.5	80.8	99.3	110.8	122.9	138.4	163.7
PEI	10.0	10.6	11.7	14.4	23.7	25.9	27.9	32.6
NS	65.1	70.8	79.4	94.3	156.5	170.7	190.6	216.4
NB	58.5	63.9	71.9	83.5	115.6	125.4	137.8	156.9
Que.	421.3	463.6	522.6	579.5	999.3	1,005.3	1,196.6	1,303.1
Ont.	587.4	606.6	751.5	894.5	1,549.1	1,661.2	1,904.6	2,182.5
Man.	64.5	80.3	81.2	88.7	182.8	203.1	219.8	245.6
Sask.	72.3	77.1	92.6	102.8	173.4	182.6	207.7	238.0
Alta.	145.9	168.0	151.2	263.9	454.1	516.7	490.1	732.1
BC	177.3	222.7	248.7	309.2	586.1	660.1	797.8	910.7
YT	3.6	4.0	5.4	6.6	9.9	10.6	13.6	15.7
NWT	4.9	5.2	5.9	6.8	12.8	13.4	15.2	17.8
Canada	1,673.6	1,843.4	2,102.9	2,543.5	4,374.2	4,697.8	5,340.8	6,214.1
Volume ('000 litres)								
Spirits								
Nfld.	3.9	4.0	4.0	4.0	1.3	1.5	1.6	1.7
PEI	1.2	1.1	1.2	1.0	0.5	0.5	0.5	0.5
NS	7.1	7.2	7.3	7.2	4.2	4.3	4.2	4.5
NB	4.5	4.5	4.3	4.2	2.5	2.7	2.6	2.8
Que.	34.0	28.0	31.7	30.4	57.5	57.8	60.7	62.6
Ont.	73.0	73.8	73.3	73.1	66.5	69.3	71.5	75.7
Man.	10.0	9.5	9.8	9.9	6.3	6.3	6.7	7.2
Sask.	8.2	8.3	8.3	8.6	4.1	4.3	4.2	4.9
Alta.	23.7	24.9	22.3	28.2	17.1	18.8	17.1	22.9
BC	29.4	28.5	31.9	30.0	32.7	33.6	40.4	40.3
YT	0.4	0.4	0.4	0.4	0.3	0.3	0.3	0.4
NWT	0.5	0.5	0.5	0.5	0.3	0.3	0.3	0.3
Canada	195.7	190.7	194.9	197.6	193.2	199.7	210.0	223.6
Beer								
Nfld.	48.9	52.3	49.8	49.4	54.1	57.8	55.4	55.1
PEI	9.4	9.1	9.0	8.3	11.0	10.7	10.6	9.7
NS	62.7	63.3	63.2	61.7	74.0	74.8	74.7	73.4
NB	52.5	53.8	55.0	52.2	59.4	60.9	61.9	59.2
Que.	588.5	590.2	591.0	583.3	680.0	676.0	683.4	676.3
Ont.	734.9	742.3	760.6	760.1	874.4	885.5	905.4	909.0
Man.	70.6	79.5	82.0	78.9	86.9	95.4	98.6	96.0
Sask.	67.4	68.0	71.6	65.1	79.7	80.6	84.1	78.6
Alta.	148.8	167.2	121.3	184.0	189.6	211.0	160.7	235.0
BC	186.1	229.0	196.2	237.0	248.1	291.1	268.5	307.3
YT	2.7	3.3	4.1	3.3	3.4	4.0	4.7	4.0
NWT	3.1	3.0	3.2	3.4	3.8	3.7	4.0	4.2
Canada	1 975.5	2 061.1	2 007.1	2 086.6	2 364.4	2 451.5	2 412.0	2 507.8

### 17.22 Revenue of all governments<sup>1</sup> specifically derived from the control, taxation and sale of alcoholic beverages, years ended Mar. 31, 1979-82 (million dollars)

Government	1979	1980	1981	1982
Government of Canada	712.9	708.6	808.7	914.6
Provincial and territorial governments				
Newfoundland	38.5	42.7	47.7	53.4
Prince Edward Island	9.2	10.2	10.7	13.8
Nova Scotia	57.5	65.3	73.0	80.0
New Brunswick	42.8	46.7	50.9	54.8
Quebec	255.5	218.4	258.9	331.7
Ontario	473.9	530.3	569.0	677.6
Manitoba	69.8	72.3	82.3	92.0
Saskatchewan	64.1	67.1	76.2	85.0
Alberta	160.5	176.0	171.0	239.1
British Columbia	215.6	233.6	292.2	334.7
Total, provincial governments	1,387.4	1,462.7	1,632.0	1,944.2
Yukon	3.8	4.1	5.7	6.3
Northwest Territories	5.4	6.0	6.8	7.6
Total, provincial and territorial governments	1,396.6	1,472.8	1,644.5	1,958.2
Total, all governments	2,109.5	2,181.4	2,453.2	2,872.8

<sup>1</sup>Revenue of the Government of Canada comprises excise duties, excise taxes, import duties and certain fees and licences. Revenue of provinces and territories includes revenue collected directly by the provincial and territorial governments as well as revenue of liquor authorities but excludes revenue resulting from general retail sales taxation.

### 17.23 Franchising in the Canadian economy, total sales (current dollars)

	1979 \$'000	1980 \$'000	1981 \$'000	Percentage change 1980-81
Retail trade	2,003	2,559	3,235	+ 26.4
Construction, home improvement, maintenance and cleaning services	1,171	1,363	1,532	+ 12.4
Hotels, motels and campgrounds	662	753	852	+ 13.1
Business services	3,321	7,713	11,174	+ 44.9
Automotive products and services	1,935	2,374	2,929	+ 23.4
Restaurants	1,707	2,008	2,349	+ 17.0
Sub-total	10,799	16,771	22,071	+ 31.6
Traditional (motor vehicle dealers, service stations, soft drink bottlers)	20,976	22,128	24,706	+ 11.7
Total	31,775	38,899	46,777	+ 20.3

### 17.24 Establishments primarily providing computer services, 1980-82

	1980	1981	Percentage change 1980-81	1982	Percentage change 1981-82
Establishments	1,036	1,392	+ 34.2	1,752	+ 25.9
Working proprietors	61	101	+ 65.6	180	+ 78.2
Paid employees	17,538	20,495	+ 16.9	22,137	+ 8.0
Salaries and wages (\$'000)	315,057	426,140	+ 35.3	534,540	+ 25.4
Employee benefits "	18,017	25,174	+ 39.7	32,788	+ 30.2
Operating revenue "	819,804	1,102,243	+ 34.5	1,347,677	+ 22.3
Revenue generated outside Canada "	48,893	58,764	+ 20.2	72,580	+ 23.5
Total operating expenses (\$'000)	728,441	953,493	+ 30.9	1,232,315	+ 29.2

#### Sources

17.1 - 17.18, 17.23, 17.24 Merchandising and Services Division, Statistics Canada.

17.19, 17.20 Market Improvement Division, Marketing and Economics Branch, Agriculture Canada.

17.21, 17.22 Public Institutions Division, Statistics Canada.

CHAPTER 18

---

# **BANKING, FINANCE AND INSURANCE**



## HIGHLIGHTS

---

The Bank of Canada is Canada's central bank and the agency directly responsible for monetary policy. It also acts as the fiscal agent for the federal government in management of the public debt. It determines the total amount of cash reserves available to the chartered banks and influences short-term interest rates.

The chartered banks are the largest deposit-taking institutions in Canada and a major source of short-to-medium term financing. In March 1984 the system included 13 Canadian-owned chartered banks and 58 foreign banks.

The Bank of Canada has the sole right to issue paper money. The Royal Canadian Mint produces coinage.

The Federal Business Development Bank helps business enterprises by providing financial and management services. Credit unions and co-operatives encourage savings and extend loans. Trust and mortgage companies are licensed by each province in which they operate. Insurance business is transacted in Canada by about 900 companies and societies.

## CHAPTER 18

---

# BANKING, FINANCE AND INSURANCE

---

<b>18.1</b>	<b>Banking</b>	<b>563</b>
18.1.1	Bank of Canada	563
18.1.2	Currency	566
18.1.3	Coinage	566
18.1.4	Chartered banks	566
18.1.5	Federal Business Development Bank	567
18.1.6	Other banking institutions	567
<b>18.2</b>	<b>Other financial institutions</b>	<b>568</b>
18.2.1	Trust and mortgage companies	568
<b>18.3</b>	<b>Insolvency</b>	<b>569</b>
<b>18.4</b>	<b>Insurance</b>	<b>570</b>
18.4.1	Life insurance	570
18.4.2	Property and casualty insurance	571
18.4.3	Fire losses	571
<b>18.5</b>	<b>Government insurance</b>	<b>571</b>
18.5.1	Deposit insurance	571
18.5.2	Provincial government insurance	571

---

## TABLES

18.1	Bank rates, 1973-84	573
18.2	Finances of the Bank of Canada	573
18.3	Federal Business Development Bank	574
18.4	Bank note liabilities	574
18.5-18.7	Currency, coinage, gold bullion	574
18.8-18.11	Operations of chartered banks	575
18.12, 18.13	Branches of chartered banks	578
18.14-18.16	Credit unions in Canada	579
18.17	Trust and mortgage companies	581
18.18	Cheques cashed	581
18.19	Trust companies	581
18.20	Mortgage companies	582
18.21	Small loans companies	583
18.22-18.25	Bankruptcies and insolvencies	583
18.26-18.30	Life insurance	588
18.31-18.34	Property and casualty insurance	590
18.35-18.37	Fire losses	594

## CHARTS

Chart 18.1	Bank rates of the Bank of Canada	565
Chart 18.2	Consumer bankruptcies	569

---

**BANKING, FINANCE AND INSURANCE****18.1 Banking****18.1.1 Bank of Canada**

Canada's central bank, the Bank of Canada, began operations on March 11, 1935, under the terms of the Bank of Canada Act, 1934, which charged it with the responsibility to regulate credit and currency in the best interests of the economic life of the nation, to control and protect the external value of the national monetary unit and to mitigate by its influence fluctuations in the general level of production, trade, prices and employment, so far as possible within the scope of monetary action and generally to promote the economic and financial welfare of Canada. The act does not specify the methods that the bank should use but it confers certain powers that, with provisions in other legislation, enable the bank to exercise a broad controlling influence over the growth of money and credit in Canada, and thereby to affect levels of spending and economic activity. Revisions to the act were made in 1936, 1938, 1954, 1967 and 1980.

The provisions of the Bank of Canada Act enable the central bank to determine the total amount of cash reserves available to the chartered banks as a group and in that way to influence the level of short-term interest rates. The Bank Act, which regulates the chartered banks, requires that each chartered bank maintain a stipulated minimum average amount of cash reserves, calculated as a percentage of deposit liabilities. Under the 1980 Bank Act revision this cash reserve requirement is 10% of reservable Canadian dollar demand deposits, 2% of reservable Canadian dollar notice deposits plus an additional 1% of the amount by which a bank's reservable Canadian dollar notice deposits exceed \$500 million, and 3% of reservable foreign currency deposits. The reserve ratios for demand deposits and Canadian dollar notice deposits over \$500 million were being phased in gradually by a series of eight semi-annual reductions beginning March 1, 1981 and ending September 1, 1984: each semi-annual reduction was 1/4 of 1% and 1/8 of 1%, respectively. Cash reserves may be held as deposits at the Bank of Canada (or, with that bank's approval at a chartered bank), holdings of Bank of Canada notes, and holdings of coins with a face value of \$2 or less that

were current under the Currency and Exchange Act. The ability of the chartered banks as a group to expand their total assets and liabilities is therefore limited by the total amount of cash reserves available.

A decrease in cash reserves tends to cause short-term interest rates to rise, making it more costly for the public to hold non-interest-bearing deposits and currency. An increase in cash reserves would put downward pressure on interest rates and indirectly induce the public to hold more money. Control of interest rates thus provides some control over the growth of the money supply.

There are two primary methods by which the Bank of Canada can alter the level of cash reserves of the chartered banks. The technique employed more often is the transfer of government deposits between the central bank and chartered banks. The second method is the purchase or sale of government securities.

The transfer of government deposits from the Bank of Canada to chartered banks or the payment by the central bank for the securities purchased adds to the cash reserves of the chartered banks as a group and puts them in a position to expand their assets and deposit liabilities. The more direct method of increasing bank reserves is the transfer of government deposits to chartered banks. Such transfers, which the bank is authorized to make as the fiscal agent of the federal government, do not involve any immediate effect on security prices and yields in financial markets.

If the Bank of Canada wishes to decrease the reserves of the chartered banks, it may either transfer government deposits from accounts at the chartered banks to the government's account at the central bank or sell government securities in the market.

In using the powers at its disposal, the Bank of Canada attempts to bring about monetary conditions consistent with a gradual deceleration in the inflation rate. Targets are set for the growth of M1, defined as the public's holdings of chartered bank demand deposits and currency, which is capable of accommodating the maximum rate of real growth consistent with continued movement toward the goal of price stability. Thus the governor of the Bank of

Canada announced (in November 1975) an explicit target range for M1, expressed as a trend rate of increase of not less than 10% but well below 15%, measured from the average level of money holdings over the second calendar quarter of 1975. Since then progressively lower target ranges have been announced. The range established in February 1981 was at 4% to 8%, measured from the three-month average level centred on September 1980.

Steadiness in monetary growth tends to stabilize total spending in the economy. When the trend growth in national expenditure exceeds that of money holdings, for any appreciable period, interest rates tend to rise. Consequently, firms and individuals are induced to moderate their spending. On the other hand, if expenditure is sluggish compared to the growth of money supply, interest rates tend to fall and there is an incentive for business and consumer spending to expand.

Within the broad framework of achieving monetary growth targets, the Bank of Canada has considered in its operations any near-term economic and financial developments that might work against the achievement of its policy objectives. Because of the potential inflationary impact of any substantial reduction in the foreign exchange value of the Canadian dollar, for example, the Bank of Canada in recent years has paid attention to movements in the differentials between Canadian and US interest rates and their influence on the exchange market.

The Bank of Canada leaves the allocation of bank and other forms of credit to the private sector of the economy. Each chartered bank is free to attempt to gain as large a share as possible of the total cash reserves available by competing for deposits and to decide what proportion of its funds to invest in particular kinds of securities and in loans to particular types of borrowers.

The Bank of Canada may buy or sell securities issued or guaranteed by Canada or any province, certain short-term securities issued by the United Kingdom, treasury bills or other obligations of the United States and certain types of short-term commercial paper. It may buy and sell gold, silver, nickel and bronze coin, or any other coin, and gold and silver bullion as well as foreign currencies and may accept non-interest-bearing deposits from the federal government or corporations and agencies of the federal government, the government of any province, any chartered bank, any bank regulated by the Quebec Savings Bank Act and any other member of the Canadian Payments Association. The Bank of Canada may open accounts in other central banks or in the Bank for International Settlements as well as maintain accounts in commercial banks to facilitate buying and selling foreign currencies; accept deposits from other central banks, the Bank for International Settlements, the International Monetary Fund, the International Bank for Reconstruction and Develop-

ment, and any other official international financial organization; and pay interest on such deposits. It may also buy and sell Special Drawing Rights issued by the International Monetary Fund. The Bank of Canada does not accept deposits from individuals nor does it compete with the chartered banks in the commercial banking field. It acts as the fiscal agent for the federal government in payment of interest and principal and generally in respect of management of the public debt of Canada. The sole right to issue paper money for circulation is vested in the bank.

The central bank also may require the chartered banks to maintain, in addition to the legal minimum cash reserve requirement, a secondary reserve which the Bank of Canada may vary within certain limits. The secondary reserve, consisting of cash reserves in excess of the minimum requirement, treasury bills and day-to-day loans to investment dealers, cannot exceed 12%. From February 1977 to November 1981, the required level was 5%; effective December 1981 the required level was 4%. In the event the Bank of Canada wishes to introduce or increase the secondary reserve requirement, 30 days' notice to the chartered banks is required; the amount of any increase in the required ratio cannot exceed 1.0% a month except when no percentage requirement is in effect, and the increase may then be no more than 6.0%. In the case of a lowering of the secondary reserve requirement, however, the percentage change in any one month is not restricted.

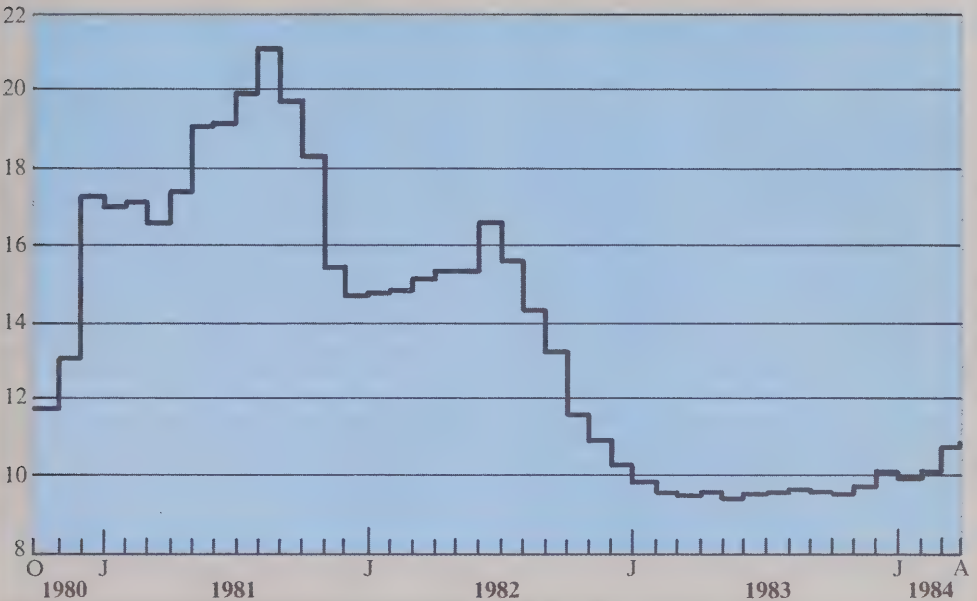
The Bank of Canada may make loans or advances for periods not exceeding six months to chartered banks, to banks to which the Quebec Savings Bank Act applies, or to other members of the Canadian Payments Association that maintain deposits with the bank, on the pledge of certain classes of securities. Loans or advances may be made under certain conditions and for limited periods to the federal government or to any provincial government. The bank must make public at all times the minimum rate at which it is prepared to make loans or advances; this rate is known as the bank rate. Typically, the bank rate is administered directly by the Bank of Canada and is changed from time to time. However, during the period from November 1, 1956 to June 24, 1962 the bank rate was set at 1/4 of 1% above the weekly average tender rate of 91-day treasury bills issued by the Government of Canada. On March 10, 1980 the Bank of Canada again established that beginning on March 13, 1980 and until further notice, the bank rate would be set at 1/4 of 1% above the latest rate established at the weekly tender for 91-day treasury bills auctioned every Thursday. On April 25, 1984 the bank rate was 10.82%. Manipulation of the bank rate is the principle tool used by the bank to control expansion of the money supply and inflation.

Purchase and resale agreements (PRA) are arrangements under which the Bank of Canada

Chart 18.1

**Bank rate of the Bank of Canada**

Percentage



provides short-term accommodations as a lender of last resort to investment dealers who are money market "jobbers". From May 12, 1974 to March 12, 1980 the PRA rate was  $\frac{1}{4}$  of 1% per annum above the average rate on 91-day treasury bills at the latest weekly tender, subject to a minimum of bank rate minus  $\frac{3}{4}$  of 1% and a maximum of bank rate plus  $\frac{1}{2}$  of 1%. Effective March 13, 1980 the rate at which the Bank of Canada has entered into these agreements has been the bank rate.

Assets and liabilities of the Bank of Canada at December 31, 1979-83 are shown in Table 18.2. The bank is not required to maintain gold or foreign exchange reserves against its liabilities.

Although the Bank of Canada operates with a large measure of independence, this does not mean that the government has been relieved of the ultimate responsibility for the general thrust of monetary policy. The Bank of Canada Act provides for regular consultation between the governor of the Bank of Canada and the finance minister as well as for a formal procedure whereby, in the event of a disagreement between the government and the central bank which cannot be resolved, the government may, after consultation, issue a directive to the Bank of Canada on the monetary policy to follow. Any such directive must be in writing, in specific

terms, and applicable for a specified period. It must be published immediately in the *Canada Gazette* and tabled in Parliament. This provision of the act makes it clear that the government must take ultimate responsibility for monetary policy but that the central bank is in no way relieved of its responsibility so long as a directive is not in effect. Such a directive has never been issued.

The Bank of Canada Act provides that the bank shall be under the management of a board of directors composed of a governor, a deputy governor and 12 directors. The governor of the bank is its chief executive officer and is authorized to act in connection with the conduct of the bank's business in all matters not specifically reserved to the board or to its executive committee. The directors are appointed for three-year terms by the finance minister with the approval of the Governor-in-Council. The directors, in turn, appoint the governor and deputy governor for seven-year terms, also with approval of the Governor-in-Council. The deputy minister of finance sits on the board but does not have a vote. Between its meetings, an executive committee composed of the governor, deputy governor, two to four directors and the deputy minister of finance (without a vote) acts for the board; it meets once a week.

The head office of the Bank of Canada is in Ottawa. It has agencies in Halifax, Saint John, Montréal, Ottawa, Toronto, Winnipeg, Regina, Calgary and Vancouver and is represented by other institutions in St. John's and Charlottetown. In addition there are representatives of head office departments in Montréal, Toronto, Edmonton and Vancouver.

### 18.1.2 Currency

When the Bank of Canada began operations in 1935 it assumed liability for Dominion notes outstanding. These were gradually replaced in public circulation and partly replaced in cash reserves by the central bank's legal tender notes. Bank of Canada notes thus replaced chartered bank notes as the issue of the latter was reduced. Further restrictions introduced by the 1944 revision of the Bank Act cancelled the right of chartered banks to issue or reissue notes after January 1, 1945, and in January 1950 the chartered banks' liability for such of their notes issued for circulation in Canada as then remained outstanding was transferred to the Bank of Canada with a concurrent adjustment to the banks' deposits at the Bank of Canada.

Bank of Canada note liabilities for the years 1979-83 are given in Table 18.4. Note circulation in public hands as at December 31, 1983 amounted to \$11.6 billion, compared to \$10.5 billion in 1982 and \$9.6 billion in 1981. Bank of Canada statistics concerning currency and chartered bank deposits are given in Table 18.5.

### 18.1.3 Coinage

Under the Currency and Exchange Act (RSC 1970, c.C-39), gold coins may be issued in the denomination of \$5, \$10, \$20, \$50 and \$100; and subsidiary coins in denominations of \$1, 50 cents, 25 cents, 10 cents, five cents and one cent.

Table 18.6 gives figures for the value of Canadian coins in circulation. Receipts of gold bullion at the Royal Canadian Mint and bullion and coinage issued are given in Table 18.7.

The Ottawa Mint, established as a branch of the Royal Mint under the United Kingdom Coinage Act of 1870, was opened on January 2, 1908. On December 1, 1931, by an act of the Canadian Parliament it became the Royal Canadian Mint and operated as a branch of the finance department. The mint was established as a Crown corporation in 1969 by the Government Organization Act of 1969 to allow for a more industrial type of organization and for flexibility in producing coins of Canada and other countries; to buy, sell, melt, assay and refine gold and precious metals; and to produce medals, plaques and other devices. The mint reports to Parliament through the minister of supply and services.

In December 1971, a cabinet decision was made to locate a new plant for the production of coin for general circulation in Winnipeg. The plant was offi-

cially opened on April 30, 1976. It supplies most of Canada's commercial coins and produces coinage for foreign countries that lack minting capacity. The Ottawa mint produces medals, plaques and other devices and refines Canadian gold. The Hull mint produces collectors' coins.

### 18.1.4 Chartered banks

Canada's chartered banks operate under the Bank Act which regulates certain internal aspects of bank operations such as auditing accounts, issuing stock, setting aside reserves and similar matters. In addition, the Bank Act generally provides for the supervision of the banks by the Inspector General of Banks, a government-appointed official. The act is revised at approximately 10-year intervals; the latest revision was enacted in December 1980. Under the revised Bank Act, foreign banks are permitted to incorporate subsidiaries by letters patent. The banking system at March 31, 1984 consisted of 13 Canadian-owned banks which have been chartered by Parliament, and 58 foreign-owned banks which have received their letters patent. The banks operated 7,084 banking offices in Canada including 149 offices of the foreign bank subsidiaries.

Among the foreign banks with subsidiaries in Canada, 41 had head offices in Toronto as at March 1984. These included 15 banks from the United States, six from the United Kingdom, five from Japan, three each from Switzerland and Israel, two each from Italy and the Federal Republic of Germany, and one each from France, Spain, India, Taiwan and Singapore.

Montréal had headquarters for banks from France, the United States, Greece and Luxembourg. Vancouver had head offices for banks from Hong Kong, Japan, the United States and Korea. Calgary was the head office location for one US bank subsidiary.

Canadian banks generally accept various types of deposits from the public including accounts payable on demand, both chequing and non-chequing notice deposits, and fixed-term deposits. In addition to holding a portfolio of securities, they typically make loans under various conditions for commercial, industrial, agricultural, and consumer purposes. Under the current revision to the Bank Act, banks may also carry out certain types of leasing and factoring business through subsidiaries. Banks also generally deal in foreign exchange, receive and pay out bank notes, and provide safekeeping facilities.

Chartered bank financial statistics for recent years are given in Tables 18.8 - 18.11; month-end data are available in the *Bank of Canada review*.

Although there has been a great increase in the number of chartered banks since December 1980, there has been a decline in the number of branches. Reflecting earlier historical growth, the number of branches of the chartered banks in each province at

periods between 1930 and 1982 is given in Table 18.12. Branches of individual Canadian chartered banks and of foreign bank subsidiaries by province as at March 31, 1984 are given in Table 18.13. The Canadian banks also maintain about 290 offices abroad in more than 50 countries, providing links in facilitating trade and handling international operations.

**Cheque payments.** The value of cheques cashed in 50 clearing centres during 1983 reached a high of \$8,628 billion, an increase of 18.2% above the value of \$7,302 billion for 1982. All five geographic regions showed increases, with the Atlantic provinces showing an increase of 10.3%, Quebec 5.0%, Ontario 25.4%, the Prairie provinces 1.4% and British Columbia 7.3%. Payments in the two leading centres also reached new highs, Toronto advancing 26.1% and Montréal 4.8% over 1982.

#### 18.1.5 Federal Business Development Bank

The Federal Business Development Bank was established by an act of Parliament in 1974 as a federal Crown corporation to succeed the Industrial Development Bank. Under the act, which came into force in October 1975, this bank assists the development of new or existing business enterprises in Canada by providing financial and management services. It supplements such services available from other sources and it gives particular attention to the needs of smaller businesses.

It extends financial help in various forms to new or existing businesses of almost every type which are unable to obtain required financing from other sources on reasonable terms and conditions. To qualify for this financing, a business should have investment by others to ensure their continuing commitment to the business which should have reasonable expectation of success.

The bank's management counselling service can help small businesses improve their methods. This service, supplementing counselling services available from the private sector, makes available the experience of retired business persons.

To help improve management skills in small businesses, the bank conducts management training seminars in smaller communities across Canada. It publishes booklets on a wide range of topics pertaining to the management of small business and provides information about assistance programs for small business sponsored by the federal government and others.

The head office is in Montréal and there are five regional offices, 95 branch offices and five sub-branches across Canada. Some 98% of the loans made by the bank are approved at the branch or regional offices.

#### 18.1.6 Other banking institutions

In addition to the savings departments of the chartered banks and of trust and loan companies,

there are provincial government financial institutions in Ontario and Alberta, and the Montréal City and District Savings Bank in Quebec, established under federal legislation and reporting monthly to the finance department. The Province of Ontario Savings Office, in operation since 1922, has branches throughout the province. Province of Alberta Treasury branches, established in 1938, provide all banking services and are authorized lending agents for farm improvement loans and small business loans guaranteed by the federal government. The Montréal City and District Savings Bank was founded in 1846 and has operated under a federal charter since 1871. Crédit Foncier Franco-Canadien became a wholly owned subsidiary of the bank in 1980. Revisions in 1980 to the Quebec Savings Banks Act expanded the business powers of the bank, enabling it to branch outside of the province of Quebec and to engage in a wider range of lending and borrowing activities.

**Credit unions.** Co-operative credit unions also encourage savings and extend loans to their members. The first credit union in Canada was founded in Lévis, Que. in 1900 to promote thrift by encouraging saving and to provide loans to members who could not get credit elsewhere or could get it only at high interest rates. For many years growth was slow; in 1911, when the first figures were available, assets amounted to \$2 million and by 1940 they were only \$25 million. However, since that time there has been a spectacular increase. The first credit union legislation was passed in Nova Scotia in 1932 followed by legislation in Manitoba and Saskatchewan in 1937 and in Ontario and British Columbia in 1938.

Credit unions are under provincial legislation. Almost all local offices in each province belong to central credit unions operating within the province. The number of chartered credit unions in Canada at the end of 1981 was 3,448. They reported a total membership of 9.8 million and assets of \$31.7 billion (Table 18.14). Quebec, with 5.1 million members and assets of \$14.8 billion, accounted for 52% of members and 47% of assets of all credit unions in Canada (Table 18.15).

Outstanding loans of credit unions at year end increased 6.1% in 1981 over 1980 to reach \$23.7 billion. Assets at \$31.7 billion increased 6.4% and savings at \$26.2 billion increased 7.7% over 1980. Membership of 9.8 million represented 40.3% of the total population.

There were 16 central credit unions in 1981; these are organized as centralized banking entities to serve the needs of local credit union members, mainly by accepting deposits of surplus funds from them and providing a source of funds for them to borrow when they cannot meet the demand for local loans. Most centrals also admit co-operatives as members. Total assets of the centrals increased 6.2% to \$7.3 billion

over the 1980 total of nearly \$6.9 billion. The Credit Union National Association serves as the central organization for provincial centrals.

Most funds are invested in securities and are financed by demand and term deposits from local credit union members. The combined total assets of local and central credit unions exceeded \$38 billion at the end of 1981.

## 18.2 Other financial institutions

### 18.2.1 Trust and mortgage companies

Trust and mortgage companies are registered with either federal or provincial governments. They operate under the federal Loan Companies Act (RSC 1970, c.L-12) and the Trust Companies Act (RSC 1970, c.T-16), or under the corresponding provincial legislation.

Trust companies operate as financial intermediaries in two areas: banking and fiduciary. Under the banking function, trust corporations can accept funds in exchange for their own credit instruments such as trust deposits and guaranteed investment certificates. This aspect of its business is often referred to as the guaranteed funds portion and differs little from the savings business of chartered banks.

Trust corporations are the only corporations in Canada with power to conduct fiduciary business. In this capacity they act as executors, trustees and administrators under wills or by appointment, as trustees under marriage or other settlements, as agents in the management of estates, as guardians of minor or incapable persons, as financial agents for municipalities and companies, as transfer agents and registrars for stock and bond issues, as trustees for bond issues and, where so appointed, as authorized trustees in bankruptcies.

Mortgage corporations may also accept deposits and may issue both short-term and long-term debentures. The investment of these funds is spelled out specifically in the acts under which most of the funds are invested in mortgages secured by real estate.

Trust and mortgage companies were established and grew rapidly under provincial legislation in the late 19th and early 20th centuries. Some companies were chartered by special acts of Parliament but it was not until 1914 that the federal government began to regulate trust and mortgage companies registered under its acts. The federal superintendent of insurance regulates the federal companies and also, by arrangement with the provinces, trust and mortgage companies incorporated in Nova Scotia and trust companies incorporated in New Brunswick and Manitoba. Companies must be licensed by each province in which they wish to operate.

Although there may be some differences among the federal and provincial acts, broad lines of the legislation are common. In their intermediary busi-

ness the companies have the power to borrow or, in the case of trust companies, to accept funds in guaranteed accounts subject to maximum permitted ratios of these funds to shareholder equity. The funds may be invested in specified assets which include: first mortgages secured by real property; government securities and the bonds and equity of corporations having established earnings records; loans on the security of such bonds and stocks; and unsecured personal loans. Trust and mortgage companies are not required to hold specified cash reserves, as are the chartered and savings banks, but there are broadly defined liquid asset requirements in a number of the acts.

In the 1920s trust and mortgage companies held about half the private mortgage business in Canada but their growth rate fell off sharply because of the effect of the depression and World War II on the mortgage business. Since then strong demand for mortgage financing has led to sustained rapid expansion.

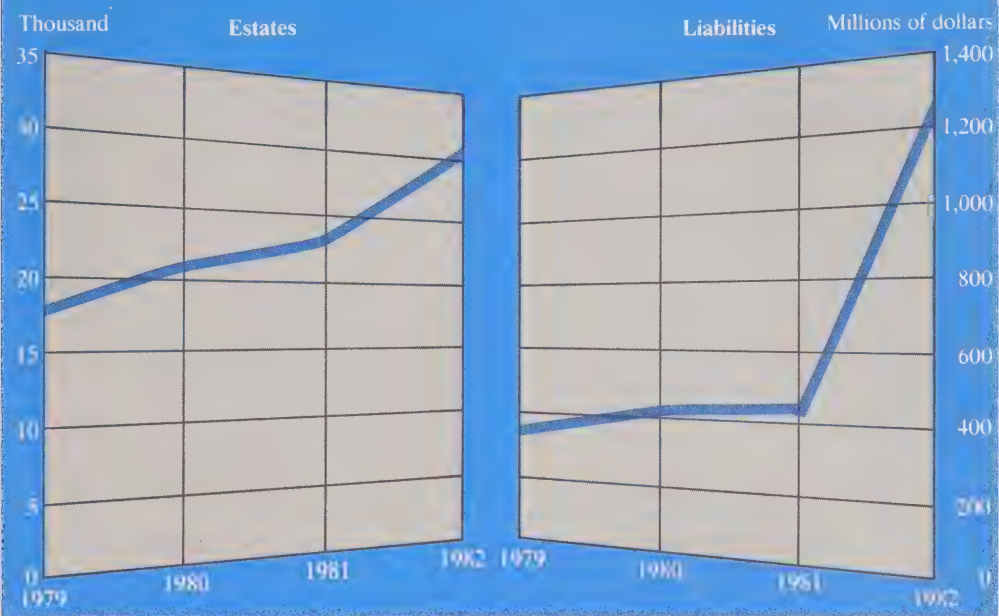
At the end of 1983 total assets of trust companies in the Statistics Canada survey were \$52.6 billion compared with \$47.4 billion in 1982, an increase of 11%. Trust companies have been putting a high proportion of their funds into mortgages and 59% of their total assets were represented by mortgages at the end of 1983. The trust companies had \$34.9 billion in term deposits outstanding and \$11.6 billion in demand deposits at the end of 1983, accounting for 88% of total funds. About 30% of demand or savings deposits were in chequing accounts. There is considerable variety among the trust companies and a few have developed a substantial short-term business, raising funds by issuing certificates for terms as short as 30 days and also operating as lenders in the money market. But the main business of trust companies in their intermediary role is to channel savings into mortgages. In addition, trust companies, as at December 31, 1983, had \$105 billion under administration in estate, trust and agency accounts. Summary statistics are given in Tables 18.17 and 18.19.

Mortgage companies had total assets of \$39.7 billion at the end of 1983 compared with \$29.0 billion in 1982. Their holdings of mortgages were \$32.4 billion, or 82% of total assets. To finance their investments, these companies sold \$23.3 billion of term deposits and debentures and \$641 million of demand deposits.

More complete and up-to-date financial information may be found in quarterly financial statements published by Statistics Canada and the Bank of Canada, the reports of the superintendent of insurance on loan and trust companies and the reports of provincial supervisory authorities.

Statistics Canada publishes quarterly balance sheets for sales finance and consumer loan companies as a whole and does not attempt to distinguish the

Chart 18.2  
Consumer bankruptcies



two groups within the industry (see *Financial institutions*, Statistics Canada Catalogue 61-006).

Assets and liabilities given in Table 18.21 are from the department of insurance report for 1979, the last year that department collected such data.

An act to amend the Small Loans Act and to provide for its repeal and to amend the criminal code was approved by the Senate and received royal assent in December 1980 (SC 1980-81-82-83, c.43). Under this act the limits on interest rates previously set for small loans, not over \$1,500, no longer applied for new loans. Formerly, for example, lenders not licensed under the act could not charge more than 1.0% interest a month. In future the only limit to rates applicable would be set out in the criminal code. The new act defines the criminal rate as an effective annual rate of interest, calculated in accordance with generally accepted actuarial practices and principles, that exceeds 60% on the credit advanced.

18.3 Insolvency

The term "insolvency" refers to the state or condition of a person (or of a company engaged in business) when he is no longer able to pay his debts as they normally become due for payment.

**Bankruptcy** may be defined as a legal process which stays all legal actions pertaining to a debtor's debts and which, in general, involves a summary and immediate seizure of all debtor property as assets by a trustee, distribution of these assets among the estate creditors, and discharge of the debtor from future liability for most of the debts which existed at the moment of bankruptcy.

While involving essentially the same administrative principles and processes under the Bankruptcy Act, a distinction is made between a consumer bankruptcy and a commercial bankruptcy because of different conceptual objectives and the impact of provincial legislation respecting the property of an individual which is exempt from seizure in a bankruptcy. A consumer bankruptcy is viewed primarily as a mechanism for providing relief to a financially overburdened debtor from legal actions such as the seizure of assets and the imposition of wage garnishments. A commercial bankruptcy is usually more complex and it is primarily a mechanism for the orderly and equitable distribution of assets of an insolvent company to free them for eventual reintegration into the economy.

Responsibility for the supervision of the bankruptcy process rests with a superintendent of bankruptcy appointed by the Governor-in-Council

who oversees the provisions of the Bankruptcy Act as it applies to trustees in bankruptcy, creditors and bankrupts. The superintendent of bankruptcy is also the director of the bankruptcy branch of Consumer and Corporate Affairs Canada. His prime responsibility is to promote confidence in and to protect the integrity of the credit system through the regulation of the bankruptcy process and through the systematic detection and prosecution of fraudulent practices and other abuses.

Operational responsibilities of the superintendent of bankruptcy include licensing and supervision of all trustees in bankruptcy, examining bankrupt estates for possible offences under the Bankruptcy Act or the criminal code, maintaining a record of all bankruptcies and of related statistical information and generally supervising a consumer bankruptcy program. The superintendent has representatives in major cities across Canada from whom more detailed information concerning bankruptcy and insolvency may be obtained.

**Receiverships** constitute the other major consequence of aggravated commercial insolvency and occur when a receiver is appointed to take possession or control under a security agreement or following a court order of all or part of the property of a debtor.

A receivership is precipitated by a secured creditor in an effort to protect his investment. In the majority of receiverships, as with many commercial bankruptcies, unsecured creditors receive little or nothing after the secured creditors realize on their security.

**Statistics.** Table 18.25 showing consolidation of estates closed provides a comparison by region of realizations, dividends paid and administrative expenses incurred for all estates which were closed during the years 1980 to 1982.

**Returns under the Bankruptcy and Winding-up Acts.** Statistics Canada data on bankruptcies and insolvencies cover only business failures coming under the federal Bankruptcy Act and the Winding-up Act. Table 18.22 gives yearly comparisons of liabilities — as estimated by debtors — for the provinces and territories. Table 18.23 shows the number of bankruptcies and insolvencies by industry and economic area for 1979-82. Table 18.24 presents data on consumer bankruptcies over the same period.

## 18.4 Insurance

Insurance business is transacted in Canada by about 900 companies and societies. Details of the classes of insurance each company or society is authorized to transact and statistical information may be found in the published reports of individual superintendents of insurance for the provinces. Financial statistics of the federally registered companies and fraternal benefit societies are published in the annual report of the federal superintendent.

### 18.4.1 Life insurance

Total life insurance in force in Canada at the end of 1982 amounted to \$512.5 billion (\$465.6 billion in 1981). There were 155 companies, two less than in 1981, registered by the federal insurance department to transact life insurance (58 Canadian, 12 British and 85 foreign). There were also 41 registered fraternal benefit societies (16 Canadian and 25 foreign).

Table 18.26 gives figures for selected years since 1880 for amounts of new insurance effected and an analysis of amounts in force at the end of the year. Table 18.27 compares newly effected written business and total amounts in force for 1979-81.

Net insurance premiums written in 1982 totalled \$3.5 billion compared to \$3.4 billion in 1981 and \$3.0 billion in 1980. Table 18.28 gives a provincial analysis of the premium income from 1979 to 1982 on a direct written basis only.

The major categories of assets and related liabilities of federally registered life insurance companies are given in Table 18.29. The major sources of income and selected expenditures are given in Table 18.30.

**Average amounts owned.** Excluding persons not covered by life insurance, the average amount of coverage for each insured individual was about \$40,000 on December 31, 1982.

The average amount owned by each household at the end of 1982 was about \$66,200. This is triple the figure in 1970.

**Purchases.** During 1982, Canadians purchased \$93.6 billion of life insurance, \$18.6 billion more than in 1981 and over six times the 1970 amount.

**Ownership by nationality of company.** Of the \$547 billion of life insurance owned by Canadians at the end of 1982, 78.5% was with Canadian-incorporated companies, 15.3% with US companies, 5% with British companies and 1.2% with companies incorporated in other parts of Europe. Federally registered companies provided 94% of the total life insurance in force.

For registered fraternal benefit societies, certificates in force in Canada totalled \$3.4 billion at the end of 1982 compared to \$3.2 billion at the end of 1981 and \$2.9 billion at the end of 1980. Premiums written in Canada totalled \$70 million during 1982, of which \$51 million was applicable to Canadian societies and \$19 million to foreign societies. In 1981 with \$62 million in premiums written, \$50 million was applicable to Canadian societies and \$12 million to foreign societies. Canadian societies also reported \$148 million in premiums written outside Canada in 1981 and \$158 million in 1982. In 1980 premiums written totalled \$54 million in Canada and in 1981 totalled \$62 million. A total of \$43 million went to Canadian societies in 1980 and \$11 million to foreign societies, while \$145 million in policies

written outside Canada were reported by Canadian societies. In 1981, \$50 million went to Canadian societies and \$12 million to foreign societies while \$148 million outside Canada were reported by Canadian societies.

#### 18.4.2 Property and casualty insurance

Direct premiums written in Canada for property and casualty insurance totalled \$9.3 billion in 1982, up from \$8.4 billion in 1981 (Table 18.32).

At the end of 1982, there were 240 companies (98 Canadian, 22 British and 120 foreign) registered by the federal insurance department to transact property and casualty insurance. At the end of 1981 there were 243 companies (101 Canadian, 22 British and 120 foreign).

For federally registered companies, premium income on a net basis totalled \$6.1 billion in 1982 and \$5.4 billion in 1981.

Property insurance net premiums written in Canada during 1982 were \$2.3 billion and in 1981 were nearly \$2.1 billion (Table 18.31). Net claims were \$1.5 billion in 1982, up \$37 million from 1981. Net premiums for automobile insurance written in Canada during 1982 were \$2.9 billion and in 1981 were \$2.5 billion. Net claims incurred were \$2.1 billion in 1982, up \$13 million from 1981.

Personal accident and sickness insurance net premiums written in Canada during 1982 were nearly \$2.1 billion and during 1981 were nearly \$1.9 billion. Net premiums earned in 1982 were \$2.1 billion and net claims incurred were \$1.9 billion, a claims ratio of 94%. In 1981 net premiums earned were nearly \$1.9 billion and net claims incurred were \$1.6 billion, a claims ratio of 86%. Net premiums for liability insurance written in Canada in 1982 were \$411 million and in 1981 were \$396 million. Net premiums earned in 1982 were \$407 million and net claims were \$344 million, a claims ratio of 84%. In 1981 net premiums earned were \$374 million and net claims were \$265 million, a claims ratio of 71%.

The major categories of assets and related liabilities of federally registered property and casualty insurance companies are given in Table 18.33.

Underwriting experience in Canada over the past years has ranged from losses of \$12.3 million in 1978 to a loss of \$859.5 million in 1981 (Table 18.34). The loss for 1982 was \$496.1 million.

#### 18.4.3 Fire losses

Fire losses in Canada reached \$998.9 million in 1982, up from \$905.4 million in 1981 and \$979.0 million in 1980. The total number of fires was 76,199 in 1982, a decrease from 79,263 in 1981 and 85,530 in 1980. The number of children who died from fire was 132 in 1982, up from 96 in 1981 but a decrease from the 163 in 1980 (Table 18.36).

For the second year in succession, the fire record reflected a slight downward trend in the number of

deaths, while injuries also declined. Property losses still showed an increase. There were 675 fire fatalities, down from 694 for 1981. The death rate was 2.73 per 100,000 population, the lowest since 1944. Injuries also declined to 3,777 from 3,840 but property losses increased about 9%.

### 18.5 Government insurance

#### 18.5.1 Deposit insurance

The Canada Deposit Insurance Corp. was established in 1967 to provide, for persons having deposits with a member of the corporation, insurance against the loss of deposits up to a maximum of \$20,000 for any one depositor. Membership in the corporation is obligatory for chartered banks, Quebec savings banks and those federally incorporated loan and trust companies that accept deposits from the public. Provincially incorporated loan and trust companies that accept deposits from the public are eligible to apply for membership if they have the consent of the province of incorporation. The definition of deposit, set out in a schedule to the Canada Deposit Insurance Corporation Act, might be summarized as money received by a member institution that is repayable on demand or notice and money that is repayable on a fixed date within five years from the date of deposit or on the anniversary date five years after the date of deposit. Deposits not payable in Canada or in Canadian currency are not insured.

#### 18.5.2 Provincial government insurance

**Manitoba.** The Manitoba Public Insurance Corp. is a Crown corporation established under the Automobile Insurance Act. The act provides for establishment of a universal, compulsory automobile insurance plan and of other plans of automobile insurance within the province. The corporation started operations November 1971. Since mid-1975, the corporation has offered a wide range of non-compulsory general insurance coverages in competition with private insurance companies. Revenue for the plan comes from two sources — premiums on drivers' licences and premiums on vehicles. Premiums are also based on such factors as year, make, model and use of the car, and rating territory, based on the address of the vehicle owner.

**Saskatchewan.** Saskatchewan Government Insurance (SGI), a provincial Crown corporation, was established in 1944 as a general insurer with the principal purposes of providing insurance coverage at reasonable rates and boosting the provincial economy by generating investment income and premium tax revenue. It became one of the largest casualty/property insurance companies in Canada.

SGI offers comprehensive home and tenant policies and most other personal lines of insurance, excluding sickness and life. Commercial property insurance, business interruption insurance,

commercial auto coverage, and liability insurance are available for businesses.

SGI also administers the Automobile Accident Insurance Act (AAIA) on behalf of the province. This provides Saskatchewan motorists with comprehensive universal insurance coverage, including \$100,000 third party liability, medical and disability coverage (plus loss of income) and collision coverage. This is the minimum required by law; extended coverage may be purchased from SGI or any other insurer. SGI competes directly with other insurers for automobile insurance beyond the compulsory coverages.

**Alberta.** A variety of agencies in Alberta offer forms of prepaid protection corresponding to insurance, but the nature of the enabling legislation governing these plans emphasizes the fact that they do not constitute insurance. Because such exemptions are specifically provided by the insurance laws of the province, reference to these plans is necessary only to make it clear that they do not come within the scope of the Alberta Insurance Act. The Alberta Hail Insurance Act and the Alberta Crop Insurance Act are administered by the Alberta Hail and Crop Insurance Corp. and each contains a clause exempting its operations from the provisions of the Alberta Insurance Act.

### Sources

- 18.1 - 18.1.2 Department of Monetary and Financial Analysis, Bank of Canada.
- 18.1.3 Numismatic Products Branch, Public Relations Branch, Royal Canadian Mint.
- 18.1.4 Department of Monetary and Financial Analysis, Bank of Canada; Research Division, The Canadian Bankers' Association; Business Finance Division, Statistics Canada.
- 18.1.5 Public Affairs, Federal Business Development Bank.
- 18.1.6 The Montréal City and District Savings Bank; Business Finance Division, Statistics Canada.
- 18.2.1 Business Finance Division, Statistics Canada.
- 18.2.2 Statement Analysis and Publications Section, Department of Insurance.
- 18.3 Bankruptcy Branch, Department of Consumer and Corporate Affairs; Business Finance Division, Statistics Canada.
- 18.4 - 18.4.2 Statement Analysis and Publications Section, Department of Insurance; *Canadian Life Insurance Facts*, Canadian Life and Health Insurance Association Inc., Toronto, 1983.
- 18.4.3 Office of the Fire Commissioner of Canada, Department of Public Works.
- 18.5 Canada Deposit Insurance Corp.; The Manitoba Public Insurance Corp.; Saskatchewan Government Insurance; Department of Consumer and Corporate Affairs, Government of Alberta.

### Selected references

- Bank of Canada review*. Bank of Canada, Ottawa, monthly.
- Canadian life insurance facts*. Canadian Life and Health Insurance Association Inc., Toronto, 1983.
- Financial institutions: Financial statistics*. Third quarter, 1983. Statistics Canada 61-006, Ottawa, 1984.
- Fire losses in Canada*. Annual report 1982. Public Works Canada, Ottawa, June 1984.
- Industrial corporations: Financial statistics*. Third quarter, 1983. Statistics Canada 61-003, Ottawa, 1984.
- Report of the superintendent of insurance for Canada*. Abstract of statements of life insurance companies and fraternal benefit societies. Department of Insurance, Ottawa, 1983.
- Report of the superintendent of insurance for Canada*. Abstract of statements of property and casualty insurance companies. Department of Insurance, Ottawa, 1983.
- Financial flow accounts. System of national accounts*. Third quarter, 1983. Statistics Canada 13-002, Ottawa, 1984.

TABLES

- .. not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed
- e estimate

p preliminary

r revised

certain tables may not add due to rounding

18.1 Bank rates from June 11, 1973 to April 25, 1984

Date of change	% per annum	Date of change	% per annum	Date of change	% per annum
June 11, 1973	6.25	Mar. 26, 1980	14.79	Apr. 28, 1982	15.32
Aug. 7, 1973	6.75	Apr. 30, 1980	15.67	May 26, 1982	15.32
Sept. 13, 1973	7.25	May 28, 1980	11.83	June 30, 1982	16.58
Apr. 15, 1974	8.25	June 25, 1980	10.67	July 28, 1982	15.60
May 13, 1974	8.75	July 30, 1980	10.18	Aug. 25, 1982	14.26
July 24, 1974	9.25	Aug. 27, 1980	10.45	Sept. 29, 1982	13.18
Nov. 18, 1974	8.75	Sept. 24, 1980	11.02	Oct. 27, 1982	11.53
Jan. 13, 1975	8.25	Oct. 29, 1980	11.76	Nov. 24, 1982	10.87
Sept. 3, 1975	9.00	Nov. 26, 1980	13.06	Dec. 29, 1982	10.26
Mar. 8, 1976	9.50	Dec. 31, 1980	17.26	Jan. 26, 1983	9.81
Nov. 22, 1976	9.00	Jan. 28, 1981	17.00	Feb. 23, 1983	9.43
Dec. 22, 1976	8.50	Feb. 25, 1981	17.14	Mar. 30, 1983	9.42
Feb. 1, 1977	8.00	Mar. 25, 1981	16.59	Apr. 27, 1983	9.46
May 9, 1977	7.50	Apr. 29, 1981	17.40	May 25, 1983	9.38
Mar. 9, 1978	8.00	May 27, 1981	19.06	June 29, 1983	9.42
Apr. 4, 1978	8.50	June 24, 1981	19.07	July 27, 1983	9.51
July 26, 1978	9.00	July 29, 1981	19.89	Aug. 31, 1983	9.57
Sept. 12, 1978	9.50	Aug. 26, 1981	21.03	Sept. 28, 1983	9.52
Oct. 16, 1978	10.25	Sept. 30, 1981	19.63	Oct. 26, 1983	9.45
Nov. 6, 1978	10.75	Oct. 28, 1981	18.30	Nov. 30, 1983	9.63
Jan. 4, 1979	11.25	Nov. 25, 1981	15.40	Dec. 28, 1983	10.04
July 23, 1979	11.75	Dec. 30, 1981	14.66	Jan. 25, 1984	9.98
Sept. 10, 1979	12.25	Jan. 27, 1982	14.72	Feb. 29, 1984	10.04
Oct. 9, 1979	13.00	Feb. 24, 1982	14.74	Mar. 28, 1984	10.76
Oct. 25, 1979	14.00	Mar. 31, 1982	15.11	Apr. 25, 1984	10.82

On March 10, 1980 the Bank of Canada announced that beginning on March 13, 1980 and until further notice, its bank rate would be set at 1/4 percentage point above the latest average rate established in the weekly tender for 91-day treasury bills issued by the Government of Canada.

The bank rates shown in the above table are as at the last Wednesday of the month beginning with March 1980.

18.2 Assets and liabilities of the Bank of Canada, as at Dec. 31, 1979-83 (million dollars)

Item	1979	1980	1981	1982	1983
Assets					
Government of Canada direct and guaranteed securities					
Treasury bills	4,240.0	5,252.4	5,245.9	2,426.5	2,762.8
Other securities three years and under	3,768.4	3,892.5	4,185.2	4,696.9	4,576.0
Other securities over three years	5,542.9	6,648.7	7,483.6	8,247.8	9,687.7
Other bills	—	—	—	—	—
Advances to members of the Canadian Payments Association	116.9	16.0	38.0	143.0	25.0
Investment in the Industrial Development Bank	344.3	170.6	—	—	—
Other investments	824.7	225.3	2.6	1,240.9	274.1
Foreign currency deposits	231.0	284.3	172.2	263.9	309.1
All other assets	677.6	823.3	2,026.5	2,404.0	3,045.9
Total assets	15,745.7	17,313.2	19,153.9	19,422.9	20,680.5
Liabilities					
Notes in circulation					
Held by chartered banks	1,800.6	1,730.6	1,997.7	2,228.2	2,556.3
All other	8,514.2	9,377.4	9,637.9	10,490.6	11,606.8
Canadian dollar deposits					
Government of Canada	24.8	58.7	384.2	81.0	90.4
Chartered banks	4,738.4	5,466.3	5,278.3	4,838.4	3,446.4
Other members of the Canadian Payments Association	—	—	—	—	146.8
Other	107.5	85.9	189.9	162.6	149.9
Foreign currency liabilities	136.5	177.9	51.9	80.8	82.9
All other liabilities	423.8	416.4	1,614.0	1,541.3	2,600.9
Total liabilities	15,745.7	17,313.2	19,153.9	19,422.9	20,680.5

### 18.3 Assets and liabilities of the Federal Business Development Bank, as at March 31, 1979-83

Item		1979 <sup>r</sup>	1980	1981	1982	1983
Assets						
Loans and investments	\$'000,000	1,618.3	1,987.2	1,991.6	1,909.9	1,759.1
Other assets	"	13.4	13.9	54.9	48.1	148.9
Total, assets	"	1,631.7	2,001.2	2,046.5	1,958.0	1,908.0
Liabilities						
Capital and reserves	\$'000,000	181.2	199.9	193.1	163.5	207.4
Notes and debentures outstanding	"	1,419.0	1,767.2	1,833.0	1,772.4	1,661.1
Other liabilities	"	31.4	34.1	20.5	22.1	39.5
Total, liabilities	"	1,631.7	2,001.2	2,046.5	1,958.0	1,908.0
Amounts outstanding	\$'000,000	1,600.0	2,200.0	2,072.7	1,958.0	1,908.0
Customers on books	No.	35,376	39,812	38,270	35,076	31,147

### 18.4 Bank of Canada note liabilities, as at Dec. 31, 1979-83 (thousand dollars)

Denomination	1979	1980	1981	1982	1983
Bank of Canada notes					
\$1	257,372	270,172	279,599	288,428	298,799
\$2	198,948	210,009	218,099	224,803	238,285
\$5	397,558	404,554	411,053	421,784	447,359
\$10	1,282,072	1,283,360	1,258,526	1,231,806	1,246,433
\$20	4,561,833	4,806,427	5,002,866	5,360,811	5,824,801
\$25	46	46	46	46	46
\$50	931,895	1,099,816	1,225,771	1,450,959	1,685,124
\$100	2,382,804	2,694,800	2,896,431	3,332,274	3,894,405
\$500	24	24	24	24	24
\$1,000	289,321	325,933	330,312	394,968	514,936
Total	10,301,873	11,095,140	11,622,726	12,705,903	14,150,212
Note issues in process of retirement <sup>1</sup>	12,881	12,880	12,878	12,879	12,876
Total, Bank of Canada note liabilities	10,314,754	11,108,020	11,635,604	12,718,782	14,163,088
Held by:					
Chartered banks	1,800,556	1,730,623	1,997,682	2,228,156	2,556,293
Others	8,514,198	9,377,397	9,637,922	10,490,626	11,606,795

<sup>1</sup>Includes, in 1980, chartered banks' notes \$8,128,317, Dominion of Canada notes \$4,635,483, provincial notes \$27,567 and defunct banks' notes \$88,156; these amounts have changed little in recent years.

### 18.5 Canadian dollar currency and chartered bank deposits, as at Dec. 31, 1972-83 (million dollars)

Year	Currency outside banks			Chartered bank deposits			Total currency and chartered bank deposits <sup>1</sup>			
	Notes	Coin	Total	Personal savings deposits	Government of Canada deposits	Other deposits <sup>1</sup>	Total <sup>1</sup>	Total including government deposits	Held by general public	
									Including personal savings deposits	Excluding personal savings deposits
1972	4,056	518	4,574	19,949	2,407	16,892	39,248	43,822	41,415	21,466
1973	4,620	589	5,209	24,604	2,361	19,220	46,186	51,395	49,034	24,430 <sup>r</sup>
1974	5,213	656	5,868	29,789	4,682	21,784	56,255	62,124	57,442	27,653 <sup>r</sup>
1975	6,079	708	6,787	33,237	3,663	27,359	64,259	71,046	67,383	34,146
1976	6,573	760	7,333	40,478	3,103	31,842 <sup>r</sup>	75,423 <sup>r</sup>	82,756 <sup>r</sup>	79,653 <sup>r</sup>	39,175 <sup>r</sup>
1977	7,268	826	8,094	44,948	4,733	36,579	86,259	94,353	89,621 <sup>r</sup>	44,673 <sup>r</sup>
1978	8,075	890	8,964	51,528	6,466	42,023	100,017	108,981	102,516 <sup>r</sup>	50,988 <sup>r</sup>
1979	8,514	954	9,468	64,216	2,418	51,288	117,922	127,390	124,972	60,756
1980	9,377	1,024	10,401	74,945	4,093	52,838	131,876	142,277	138,184	63,239
1981 <sup>2</sup>	9,638	1,081	10,719	92,513	7,138	67,355	167,006	177,725	170,587	78,074
1982	10,491	1,142	11,633	100,037	6,096	66,800	173,743	185,376	178,470	78,433
1983	11,607	1,202	12,809	101,485	6,057	62,272	169,814	182,623	176,566	75,801

<sup>1</sup>Less total float, (cheques and other items in transit).

<sup>2</sup>Effective November 1981, chartered bank data is reported on a consolidated basis.

**18.6 Canadian coin<sup>1</sup> in circulation, as at Dec. 31, 1975-82**

Year	Gold \$'000	Silver \$'000	Nickel \$'000	Tombac <sup>2</sup> \$'000	Steel \$'000	Bronze \$'000	Total \$'000	Per capita \$
1975	...	444,548	382,334	549	3,440	71,490	902,361	39.58
1976	...	508,680	423,710	549	3,440	77,926	1,014,304	43.27
1977	14,319	509,303	470,262	548	3,439	83,183	1,081,054	45.60
1978	20,000	509,021	541,548	548	3,439	91,619	1,146,175	48.57
1979	...	509,803	621,367	549	3,439	98,604	1,233,761	51.82
1980	...	510,439	676,008	549	3,439	109,052	1,299,486	53.95
1981	...	511,133	730,422	549	3,438	119,626	1,365,169	56.08
1982	...	511,956	772,126	549	3,438	129,268	1,419,098 <sup>3</sup>	—

<sup>1</sup>The figures shown are of net issues of coin.

<sup>2</sup>Tombac, a copper-zinc alloy, was used to conserve nickel for war purposes; no coins of this metal have been issued since 1944.

<sup>3</sup>Includes \$1,761,000 in cupronickel, a copper-nickel alloy.

**18.7 Receipts of gold bullion at the Royal Canadian Mint and bullion and coinage issued, 1975-82**

Year	Gold received '000 oz t	Gold bullion issued '000 oz t	Gold coin issued \$'000	Silver coin issued \$'000	Nickel coin issued \$'000	Bronze coin issued \$'000
1975	1,079	1,056	...	58,203	60,939	6,295
1976	1,633	1,665	...	57,398	41,404	6,437
1977	1,783	1,452	14,310	826	46,600	5,261
1978	1,559	1,219	20,000	745	71,340	8,439
1979	3,121	2,525	75,000	953	79,875	6,987
1980	3,541	—	73,778	521	54,186	10,405
1981	3,227	—	53,245	695	13,699	11,037
1982 <sup>1</sup>	3,796	—	59,391	904	44,266	9,642

<sup>1</sup>In addition, \$1,761,000 worth of cupronickel coin was issued.

**18.8 Chartered banks, cash and secondary reserves, 1972-83 (million dollars)**

Year	Statutory deposits (excluding adjustments for previous periods)		Cash reserves		Secondary reserves
	Canadian dollar	Foreign currency	Statutory coin and Bank of Canada notes	Bank of Canada deposits	
1972	36,951	—	687	1,615	3,131
1973	42,246	—	768	1,902	3,499
1974	49,814	—	888	2,106	4,174
1975	60,225	—	985	2,654	3,672
1976	69,642	—	1,071	2,911	4,244
1977	80,496	—	1,161	3,411	4,568
1978	91,299	—	1,250	3,997	5,455
1979	107,162	—	1,361	4,564	6,330
1980	123,753	—	1,499	4,983	7,393
1981	137,568	6,525	1,748	5,403	8,884
1982	145,151	6,324	1,939	4,917	8,450
1983	135,447	6,271	2,107	4,075	12,697

Statutory deposits and coin, and Bank of Canada notes are averages of the months in the year shown; the monthly levels are averages of the four consecutive Wednesdays ending with the second last Wednesday of the previous month until January 1981. Effective February 1981, monthly levels are averages of the four consecutive Wednesdays ending with the second Wednesday of the previous month. Bank of Canada deposits and secondary reserves are also averages of the months in the year shown; however, the monthly levels are calculated as an average of the juridical days in that month. From February 1968 to January 1981 the required primary cash reserve ratios were 12% for Canadian dollar demand deposits and 4% for Canadian dollar notice deposits. As of February 1, 1981, the required ratios were 12% for reservable Canadian dollar demand deposits, 2% for reservable Canadian dollar notice deposits plus 2% for the amount by which a bank's reservable Canadian dollar notice deposits exceed \$500 million, and 3% for reservable foreign currency deposits. Beginning March 1, 1981 and for each of the next seven succeeding six-month periods, the required rate on Canadian dollar demand deposits will be decreased by 1/4 of 1%, while that on the amount by a bank's reservable Canadian dollar notice deposits exceed \$500 million will be decreased by 1/8 of 1% until by September 1984 the required ratios reach 10% and 1%, respectively. The secondary reserve requirement was set as follows, 8.5% in December 1971, 8% in January 1972, 7% in December 1974, 6% in January 1975, 5.5% in March 1975, 5% in February 1977 and 4% in December 1981.

### 18.9 Classification of chartered bank deposit liabilities payable to the public in Canada and in Canadian currency, as at Apr. 30, 1980-83 (number of accounts)

Deposit accounts of the public of:	Personal savings deposit accounts	Other deposit accounts of the public	Total deposit accounts of the public	Personal savings deposit accounts	Other deposit accounts of the public	Total deposit accounts of the public
	1980			1981		
Less than \$100	9,291,792	3,150,459	12,442,251	9,486,231	3,206,043	12,692,274
\$100 or over but less than \$1,000	7,292,520	3,478,935	10,771,455	7,747,153	3,474,076	11,221,229
\$1,000 or over but less than \$10,000	7,897,964	1,848,430	9,746,394	8,409,212	1,975,116	10,384,328
\$10,000 or over but less than \$100,000	1,656,884	389,267	2,046,151	1,937,348	418,711	2,356,059
\$100,000 or over	35,747	69,453	105,200	51,639	80,557	132,196
<b>Total deposits</b>	<b>26,174,907</b>	<b>8,936,544</b>	<b>35,111,451</b>	<b>27,631,583</b>	<b>9,154,503</b>	<b>36,786,086</b>
	1982			1983		
Less than \$100	9,601,442	3,145,744	12,747,186	—	—	—
\$100 or over but less than \$1,000	8,132,806	3,421,771	11,554,577	—	—	—
\$1,000 or over but less than \$10,000	9,275,796	2,065,135	11,340,931	9,409,727	1,974,338	11,384,065
\$10,000 or over but less than \$100,000	2,419,598	436,522	2,856,120	2,621,246	423,388	3,044,634
\$100,000 or over	74,712	90,432	165,144	64,102	82,041	146,143
<b>Total deposits</b>	<b>29,504,354</b>	<b>9,159,604</b>	<b>38,663,958</b>	<b>29,839,212</b>	<b>8,646,924</b>	<b>38,486,136</b>

### 18.10 Total Canadian-owned chartered banks, consolidated statement of revenue and expense (million dollars)

	1979	1980	1981	1982	1983
<b>INTEREST INCOME</b>					
Loans, excluding leases	15,873.4	22,610.8	35,975.5	39,636.5	29,715.1
Lease financing	110.3	178.0	233.4	280.0	285.6
Securities	2,059.7	2,404.5	3,060.4	3,122.3	2,795.0
Deposits with banks	2,813.7	4,070.3	5,608.0	5,658.1	3,733.0
Total including dividends	20,857.0	29,263.7	44,877.3	48,696.9	36,528.7
<b>INTEREST EXPENSE</b>					
Deposits	15,523.8	23,132.4	37,319.4	40,371.7	26,929.0
Bank debentures	169.5	207.8	289.9	491.0	475.4
Liabilities other than deposits	239.1	306.4	275.0	336.0	267.1
<b>Total</b>	<b>15,932.3</b>	<b>23,646.6</b>	<b>37,884.3</b>	<b>41,198.7</b>	<b>27,671.5</b>
Net interest income	4,924.7	5,617.0	6,993.0	7,498.2	8,857.2
Less provision for loan losses	-486.3	-624.7	-864.6	-1,397.5	-1,710.6
Net interest income after provision for loan losses	4,438.5	4,992.3	6,128.4	6,100.8	7,146.6
Other income	1,220.7	1,473.2	1,821.6	2,079.9	2,340.1
<b>Net interest and other income</b>	<b>5,659.2</b>	<b>6,465.5</b>	<b>7,950.0</b>	<b>8,180.6</b>	<b>9,486.7</b>
<b>NON-INTEREST EXPENSE</b>					
Salaries	2,395.2	2,747.1	3,199.1	3,689.4	3,756.9
Pension contribution and other staff benefits	232.3	276.4	315.4	352.0	365.7
Premises and equipment, including depreciation	707.7	810.6	943.9	1,113.2	1,220.2
Other	881.1	1,070.3	1,262.0	1,396.0	1,421.4
<b>Total</b>	<b>4,216.2</b>	<b>4,904.4</b>	<b>5,720.5</b>	<b>6,550.5</b>	<b>6,764.2</b>

**18.10 Total Canadian-owned chartered banks, consolidated statement of revenue and expense**  
 (million dollars) (concluded)

	1979	1980	1981	1982	1983
Net income before provision for income taxes	1,443.0	1,561.1	2,229.4	1,630.1	2,722.5
Provision for income taxes	-249.9	-227.5	-464.9	-104.9	-813.3
Net income before minority interest in subsidiaries and extraordinary items	1,193.1	1,333.6	1,764.5	1,525.3	1,909.2
Minority interest in subsidiaries	-19.5	-16.9	-15.6	-12.7	-13.0
Extraordinary items	—	—	4.7	—	36.7
<b>NET INCOME</b>	<b>1,173.6</b>	<b>1,316.7</b>	<b>1,753.6</b>	<b>1,512.5</b>	<b>1,932.9</b>

Note: Since 1965 all chartered banks have ended their years on 31 October. The consolidated statements of revenue and expense and of shareholders' equity and appropriations for contingencies are based on the format prescribed in Schedules L, M and N of the 1980 Bank Act. The operations of all majority-owned subsidiaries are fully consolidated into income with the minority interest shown separately. Where a bank holds at least 20% but not more than 50% of a company's voting shares, the bank takes into its income an amount equivalent to its share of that company's earnings.

**18.11 Total Canadian-owned chartered banks, statement of shareholders' equity and appropriations for contingencies** (million dollars)

	1979	1980	1981	1982	1983
<b>CAPITAL STOCK</b>					
Balance at beginning of year	516.9	588.5	647.5	1,538.8	2,885.1
Additions from capital stock issues:					
Common shares	71.6	24.6	16.9	68.8	312.8
Preferred shares	—	34.5	874.4	600.5	327.5
Transfer from contributed surplus	—	—	—	677.0	455.0
Balance at end of year	588.5	647.5	1,538.8	2,885.1	3,980.4
<b>CONTRIBUTED SURPLUS</b>					
Balance at beginning of year	1,205.1	1,330.6	1,648.6	1,770.7	1,311.8
Additions from capital stock issue	125.5	317.9	122.1	218.1	123.0
Transfer to capital stock	—	—	—	-677.0	-455.0
Transfer to retained earnings	—	—	—	—	-3.9
Balance at end of year	1,330.6	1,648.6	1,770.7	1,311.8	975.9
<b>GENERAL RESERVE</b>					
Balance at beginning of year	26.8	19.5	31.6	25.8	25.3
Transfer from (to) retained earnings	-7.3	12.1	-5.8	-0.5	-25.3
Balance at end of year	19.5	31.6	25.8	25.3	—
<b>RETAINED EARNINGS</b>					
Balance at beginning of year	4,160.7	4,909.5	5,711.9	6,770.6	7,035.4
Prior period adjustments	0.6	0.6	0.3	49.6	—
Share issue expenses, net	-2.5	-4.0	-10.7	-11.4	-4.7
Net income for year	1,173.6	1,316.7	1,753.6	1,512.5	1,932.9
Dividends:					
Common	-356.6	-405.7	-496.7	-588.9	-586.0
Preferred	-3.0	-6.4	-56.2	-140.5	-176.9
Transfer from (to) appropriations for contingencies	-114.0	-171.2	-269.9	-912.2	-1,048.8
Income taxes related to above transfer	43.4	84.5	132.7	325.1	375.3
Transfer from (to) general reserve	7.3	-12.1	5.8	0.5	25.3
Transfer from contributed surplus	—	—	—	—	3.9
Balance at end of year	4,909.5	5,711.9	6,770.6	7,035.4	7,556.4
<b>Total shareholders' equity at end of year</b>	<b>6,848.1</b>	<b>8,039.6</b>	<b>10,105.9</b>	<b>11,257.6</b>	<b>12,512.7</b>
<b>APPROPRIATIONS FOR CONTINGENCIES</b>					
Balance at beginning of year	692.1	855.3	864.0	1,063.8	925.1
Net loss experience on loans	-437.0	-787.2	-934.8	-2,448.4	-2,939.2
Provision for loan losses	486.3	624.7	864.6	1,397.5	1,710.5
Transfer from (to) retained earnings	114.0	171.2	269.9	912.2	1,048.8
Balance at end of year	855.3	864.0	1,063.8	925.1	745.2
<b>Total shareholders' equity and appropriations for contingencies</b>	<b>7,703.5</b>	<b>8,903.6</b>	<b>11,169.7</b>	<b>12,182.6</b>	<b>13,257.9</b>

See note, Table 8.10.



**18.13 Branches<sup>1</sup> of individual chartered banks, by province, as at Mar. 31, 1984 (concluded)**

Bank	Province or territory											Canada
	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT and NWT	
Irving Bank Canada	—	—	—	—	—	1	—	—	—	—	—	1
Israel Discount Bank of Canada	—	—	—	—	—	1	—	—	—	—	—	1
Korea Exchange Bank of Canada	—	—	—	—	—	—	—	—	—	1	—	1
Lloyds Bank International Canada	—	—	—	—	1	2	—	—	1	1	—	5
Manufacturers Hanover Bank of Canada	—	—	—	—	1	—	—	—	1	1	—	3
Mellon Bank Canada	—	—	—	—	—	1	—	—	—	—	—	1
Midland Bank Canada	—	—	—	—	—	1	—	—	2	1	—	4
Mitsubishi Bank of Canada	—	—	—	—	—	1	—	—	—	1	—	2
The Mitsui Bank of Canada	—	—	—	—	—	1	—	—	—	1	—	2
Morgan Bank of Canada	—	—	—	—	—	1	—	—	—	—	—	1
National Bank of Detroit, Canada	—	—	—	—	—	3	—	—	—	—	—	3
National Bank of Greece (Canada)	—	—	—	—	3	1	—	—	—	—	—	4
National Westminster Bank of Canada	—	—	—	—	1	—	—	—	1	1	—	3
Overseas Bank (Canada)	—	—	—	—	—	—	—	—	—	1	—	1
Overseas Union Bank of Singapore (Canada)	—	—	—	—	—	1	—	—	—	—	—	1
Paribas Bank of Canada	—	—	—	—	—	1	—	—	—	—	—	1
Republic National Bank of New York (Canada)	—	—	—	—	1	—	—	—	—	—	—	1
Sanwa Bank Canada	—	—	—	—	—	1	—	—	—	1	—	2
Seattle-First Bank Canada	—	—	—	—	—	—	—	—	1	—	—	1
Security Pacific Bank Canada	—	—	—	—	—	1	—	—	—	—	—	1
Société Générale (Canada)	—	—	—	—	2	1	—	—	2	1	—	6
Standard Chartered Bank of Canada	—	—	—	—	1	2	—	—	1	1	—	5
State Bank of India (Canada)	—	—	—	—	—	1	—	—	—	1	—	2
Swiss Bank Corporation (Canada)	—	—	—	—	1	1	—	—	1	1	—	4
Union Bank of Switzerland (Canada)	—	—	—	—	—	1	—	—	—	—	—	1
Wells Fargo Bank Canada	—	—	—	—	—	—	—	—	1	—	—	1
<b>Total</b>	<b>140</b>	<b>30</b>	<b>243</b>	<b>179</b>	<b>1,277</b>	<b>2,773</b>	<b>345</b>	<b>394</b>	<b>820</b>	<b>856</b>	<b>27</b>	<b>7,084</b>

<sup>1</sup>Figures include sub-agencies and sub-branches in Canada for receiving deposits.

**18.14 Local credit unions in Canada, 1975-81**

Year	Credit unions chartered	Members	Assets \$'000	Loans granted to members \$'000
1975 <sup>f</sup>	4,083	7,268,552	12,331,379	8,432,483
1976 <sup>f</sup>	4,039	7,742,412	15,077,462	10,623,470
1977 <sup>f</sup>	3,938	8,406,748	18,929,159	13,606,922
1978	3,868	8,905,173	23,233,433	17,168,126
1979	3,665	9,296,841	26,671,497	20,231,595
1980	3,595	9,652,291	29,763,317	22,344,082
1981	3,448	9,842,120	31,657,404	23,716,793

**18.15 Summary statistics of local credit unions, by province, 1978-81**

Year and province	Credit unions chartered	Members	Assets \$'000	Shares \$'000	Deposits \$'000	Loans granted to members \$'000
1978						
Newfoundland	21	11,079	24,317	9,732	11,286	20,464
Prince Edward Island	13	22,480	28,506	8,742	13,481	23,889
Nova Scotia	118	161,513	189,880	83,240	92,729	149,214
New Brunswick	136	198,259	281,867	141,259	116,144	224,823
Quebec	1,557	4,598,516	10,129,957	1,224,588	8,269,010	6,915,849
Ontario	1,245	1,716,000	4,227,000	1,300,000	2,704,000	3,248,200
Manitoba	196	351,926	1,142,403	1,749	1,069,710	920,292
Saskatchewan	238	518,085	2,081,061	389,265	1,523,628	1,433,435
Alberta	180	432,990	1,427,423	157,097	1,127,196	1,170,124
British Columbia	164	894,325	3,691,019	232,934	3,178,762	3,061,836
<b>Total</b>	<b>3,868</b>	<b>8,905,173</b>	<b>23,223,433</b>	<b>3,548,606</b>	<b>18,105,946</b>	<b>17,168,126</b>
1979						
Newfoundland	19	12,440	27,938	10,769	15,333	23,771
Prince Edward Island	13	24,876	32,964	9,482	16,373	27,698
Nova Scotia	117	170,097	201,970	85,204	98,386	161,389
New Brunswick	133	201,436	326,228	150,061	144,721	263,567

### 18.15 Summary statistics of local credit unions, by province, 1978-81 (concluded)

Year and province	Credit unions chartered	Members	Assets \$'000	Shares \$'000	Deposits \$'000	Loans granted to members \$'000
Quebec	1,562	4,804,308	11,779,893	1,359,605	9,640,403	8,392,692
Ontario	1,081	1,742,744	4,710,848	1,182,732	3,185,375	3,711,998
Manitoba	166	351,200	1,264,717	1,756	1,189,767	1,029,534
Saskatchewan	237	546,472	2,380,931	366,181	1,830,064	1,721,990
Alberta	179	484,310	1,750,134	154,230	1,407,251	1,464,429
British Columbia	158	958,958	4,195,874	194,460	3,740,150	3,434,527
<b>Total</b>	<b>3,665</b>	<b>9,296,841</b>	<b>26,671,497</b>	<b>3,514,480</b>	<b>21,267,823</b>	<b>20,231,595</b>
<b>1980</b>						
Newfoundland	19	13,331	31,732	10,545	19,712	25,682
Prince Edward Island	13	25,551	35,888	8,835	18,953	29,092
Nova Scotia	116	163,502	199,168	82,220	105,738	155,647
New Brunswick	133	213,512	356,461	151,399	174,003	281,412
Quebec	1,552	4,980,877	13,327,538	1,386,756	10,948,535	9,877,560
Ontario	1,041	1,869,128	5,070,496	985,260	3,803,415	3,795,511
Manitoba	166	334,600	1,283,237	1,673	1,254,155	994,894
Saskatchewan	230	561,009	2,626,146	350,240	2,072,074	1,828,200
Alberta	169	526,658	2,015,565	143,280	1,709,783	1,654,179
British Columbia	156	964,123	4,817,086	177,074	4,274,005	3,701,905
<b>Total</b>	<b>3,595</b>	<b>9,652,291</b>	<b>29,763,317</b>	<b>3,297,282</b>	<b>24,380,373</b>	<b>22,344,082</b>
<b>1981</b>						
Newfoundland	18	13,872	34,819	8,817	22,561	28,585
Prince Edward Island	12	25,826	39,525	8,278	22,355	28,821
Nova Scotia	113	158,846	195,049	75,947	107,048	152,622
New Brunswick	130	220,402	378,032	135,366	209,842	288,084
Quebec	1,548	5,142,239	14,838,899	1,318,772	12,316,452	10,933,667
Ontario	999	1,846,375	4,886,437	799,195	3,780,733	3,686,411
Manitoba	112	347,600	1,200,633	1,738	1,140,488	930,520
Saskatchewan	227	576,135	2,843,054	284,659	2,350,660	1,974,005
Alberta	151	549,289	2,230,222	131,059	1,875,212	1,791,505
British Columbia	138	961,536	5,010,734	141,970	4,423,112	3,902,573
<b>Total</b>	<b>3,448</b>	<b>9,842,120</b>	<b>31,657,404</b>	<b>2,905,801</b>	<b>26,248,463</b>	<b>23,716,793</b>

### 18.16 Assets, liabilities and members' equity of local credit unions in Canada, 1979-81 (million dollars)

Item	1979	1980	1981	Item	1979	1980	1981
<b>Assets</b>				<b>Fixed assets</b>			
Cash and demand deposits				Land, buildings, equipment and furniture	482	535	570
On hand	340	386	410	Stabilization fund deposits	77	88	94
In banks	61	99	106	Other assets	341	469	627
In centrals	2,288	2,344	2,502	<b>Total, assets</b>	<b>26,671</b>	<b>29,763</b>	<b>31,657</b>
Other	39	80	84				
<b>Investments</b>				<b>Liabilities</b>			
Term deposits	1,516	1,980	2,164	Accounts payable			
Government of Canada	93	138	97	Interest	370	517	668
Provincial governments	205	190	163	Dividends	28	26	27
Municipal governments	330	307	235	Other	85	126	169
Shares in centrals	330	279	292	<b>Loans payable</b>			
Other	450	666	772	Centrals	586	512	634
<b>Loans</b>				<b>Banks</b>	31	33	92
Cash loans				Other	52	115	158
Personal	5,764	6,009	5,785	<b>Deposits</b>			
Farm	438	456	635	Demand	10,825	12,773	11,896
Co-operatives and other enterprises	300	446	1,146	Term	10,443	11,606	14,352
Other	327	364	173	<b>Other liabilities</b>	108	122	121
<b>Mortgage loans</b>				<b>Members' equity</b>			
Dwellings	11,174	12,379	12,345	Share capital	3,514	3,297	2,906
Farm	469	477	888	Reserves	509	558	599
Co-operatives and other enterprises	1,537	2,130	2,173	Undivided surplus	120	78	35
Other	223	82	572				
<b>Allowance for doubtful loans</b>	<b>113</b>	<b>141</b>	<b>176</b>	<b>Total, liabilities and members' equity</b>	<b>26,671</b>	<b>29,763</b>	<b>31,657</b>

**18.17 Revenues and expenses of trust and mortgage loan companies, 1981-83 (million dollars)**

Item	Trust companies			Mortgage companies		
	1981	1982	1983	1981	1982	1983
Revenues						
Interest earned	5,173	5,825	5,603	2,278	3,223	4,141
Dividends	146	147	142	55	53	48
Fees and commissions	682	651	806	6	18	23
Other revenues	156	143	183	86	174	184
Total, revenues	6,157	6,766	6,734	2,425	3,468	4,396
Expenses						
Interest	4,821	5,274	4,820	2,092	3,036	3,689
Depreciation	31	31	38	2	3	3
Amortization	3	4	3	2	3	5
Income taxes	-21	6	10	8	6	59
Other expenses	1,154	1,261	1,595	193	285	413
Total, expenses	5,988	6,576	6,466	2,297	3,333	4,169
Net profit	169	190	268	128	135	227

**18.18 Cheques cashed at 50 centres, by province or region, 1980-82 (million dollars)**

Clearing centre	1980	1981	1982	Clearing centre	1980	1981	1982
ATLANTIC PROVINCES	96,517	114,394	120,191	London	37,955	46,847	43,064
Charlottetown	3,378	4,035	4,406	Niagara Falls	3,975	4,352	4,560
Fredericton	8,657	10,475	10,402	Oshawa	24,893	23,295	19,679
Glace Bay	253	287	289	Ottawa	78,725	102,051	114,207
Halifax	37,825	46,323	51,964	Peterborough	3,622	4,506	4,604
Moncton	4,541	5,217	5,558	St. Catharines	8,974	9,965	9,841
Saint John	13,421	16,988	13,917	Sarnia	9,095	14,312	17,728
St. John's	23,692	26,251	28,356	Sault Ste Marie	4,510	5,923	5,939
Sydney	4,750	4,818	5,299	Sudbury	5,021	5,916	7,341
QUEBEC	880,055	1,002,751	966,080	Thunder Bay	7,370	8,680	9,559
Chicoutimi	4,508	4,602	4,367	Timmins	2,019	2,737	3,493
Drummondville	1,795	2,089	2,085	Toronto	3,078,722	3,847,302	4,404,288
Granby	2,342	2,610	2,633	Windsor	20,716	22,072	20,336
Montréal	728,250	842,226	798,760	PRAIRIE PROVINCES	626,458	822,952	943,356
Québec City	127,457	133,519	139,262	Brandon	2,333	2,996	3,168
Saint-Hyacinthe	4,161	4,521	4,273	Calgary	235,864	335,147	382,836
Shawinigan Falls	991	1,187	2,421	Edmonton	163,245	209,852	247,738
Sherbrooke	5,408	5,892	6,129	Lethbridge	5,320	6,619	6,564
Trois-Rivières	3,867	4,494	4,473	Medicine Hat	3,994	4,319	3,886
Valleyfield	1,276	1,611	1,677	Moose Jaw	1,790	2,249	2,325
ONTARIO	3,389,470	4,222,341	4,784,667	Prince Albert	2,056	2,567	2,454
Brantford	5,240	6,858	6,885	Regina	38,724	47,080	48,391
Chatham	12,880	13,961	11,625	Saskatoon	14,867	17,328	20,354
Cornwall	2,682	3,465	3,819	Winnipeg	158,265	194,795	225,640
Guelph	5,373	6,319	5,026	BRITISH COLUMBIA	382,836	519,385	488,102
Hamilton	60,051	74,067	69,683	Vancouver <sup>1</sup>	305,028	388,267	324,390
Kingston	4,692	5,652	6,673	Victoria	77,808	131,118	163,712
Kitchener	12,955	14,061	16,317	Total	5,375,336	6,681,823	7,302,396

<sup>1</sup>Includes New Westminster.**18.19 Assets, liabilities and shareholders' equity of trust companies, 1981-83 (million dollars)**

Item	1981	1982	1983	Item	1981	1982	1983
Assets				Assets (continued)			
Cash and demand deposits				Investments in Canada			
Chartered banks				Term deposits			
Canadian currency	577	650	315	Swapped deposits	22	323	138
Foreign currency	5	9	13	Chartered banks			
Branches of Canadian banks				Canadian currency	1,717	1,379	896
outside Canada	2	3	1	Foreign currency	223	313	86
Other institutions in Canada				Other institutions	183	182	217
and outside Canada	19	4	6				

### 18.19 Assets, liabilities and shareholders' equity of trust companies, 1981-83 (million dollars) (concluded)

Item	1981	1982	1983	Item	1981	1982	1983
<b>Assets (concluded)</b>				<b>Liabilities</b>			
Short-term bills and notes				Demand deposits			
Canada treasury bills	232	866	1,706	Chequing	1,789	2,377	3,478
Provincial treasury bills and notes	213	524	928	Non-chequing	4,532	5,334	4,878
Municipal notes	13	21	21	For RRSP	2,294	2,660	2,835
Sales finance companies' notes	89	64	103	For RHOSP	303	346	356
Commercial paper	1,536	2,516	2,702	Other tax shelters	2	3	4
Long-term bonds, debentures and notes				Term deposits with original term of			
Canada	1,041	910	1,045	Less than one year	6,104	5,429	5,385
Provincial	712	800	957	One to five years	17,612	18,402	20,448
Municipal	280	354	373	Over five years	197	224	206
Corporation	2,103	2,619	2,771	For RRSP purposes	4,734	6,279	7,709
Investment in units of real estate investment trusts	1	26	26	For RHOSP purposes	144	158	165
Corporation shares	2,022	1,975	2,401	Other	1,224	924	1,023
Investment in subsidiaries				Bank loans			
Shares	234	244	321	Chartered banks	104	62	175
Advances	177	309	368	Banks outside Canada	—	—	1
Other investments in Canada	13	23	48	Accounts payable	1,551	1,837	1,944
Investments outside Canada				Income tax payable	— 10	12	32
Corporation shares	12	52	147	Owing to parent and affiliated Canadian companies	418	378	292
Other	38	56	43	Other notes and loans payable	151	65	502
Loans				Deferred income	30	44	55
Mortgages				Mortgages payable	106	131	127
National Housing Act	4,644	4,865	5,706	Deferred income taxes	225	195	215
Conventional	19,151	19,314	20,566	Other liabilities	147	246	226
Residential	4,204	4,280	4,839	Shareholders' equity			
Non-residential				Share capital			
Personal	994	1,175	1,372	Preferred	411	460	444
Secured	696	683	774	Common	465	491	544
Unsecured				Contributed surplus	273	342	474
Collateral business loans	9	24	151	Reserves	155	194	225
With investment dealers	668	652	706	Retained earnings	680	767	851
Other collateral loans	138	171	497	Total, liabilities and shareholders' equity	43,641	47,360	52,594
Other loans	294	336	455				
Lease contracts							
Accounts receivable and accruals	802	845	969				
Fixed assets, held for own use or for income	315	461	531				
Real estate held for sale	113	189	301				
Other assets	149	143	95				
Total, assets	43,641	47,360	52,594				

### 18.20 Assets, liabilities and shareholders' equity of mortgage companies, 1980-82 (million dollars)

Item	1980	1981	1982	Item	1980	1981	1982
<b>Assets</b>				<b>Assets (continued)</b>			
Cash and demand deposits				Municipal	5	4	5
Chartered banks				Corporation	264	533	940
Canadian currency	90	129	102	Investments in units of real estate investment trust	—	79	93
Foreign currency	—	8	2	Corporation shares	441	362	327
Other institutions in Canada and outside Canada	26	29	39	Investment in subsidiaries			
Investments in Canada				Shares	503	340	474
Term deposits				Advances	146	285	309
Chartered banks				Other investments in Canada	2	2	2
Canadian currency	393	374	286	Investments outside Canada			
Foreign currency (including swapped deposits)	15	25	211	Term deposits, bills and notes	—	—	—
Other institutions	27	20	26	Long-term bonds, debentures and notes	22	25	21
Short-term bills and notes				Corporation shares	21	22	18
Canada treasury bills	110	9	273	Investment in and advances to subsidiaries	14	51	—
Provincial treasury bills and notes	—	28	81	Loans			
Municipal notes	—	—	—	Mortgages			
Sales finance companies' notes	—	—	4	National Housing Act	2,316	3,796	6,370
Commercial paper	131	106	426	Conventional	9,166	11,739	15,633
Long-term bonds, debentures and notes				Residential	1,474	1,870	1,720
Canada	232	201	229	Non-residential			
Provincial	29	45	79	Personal			
				Secured	8	10	6
				Unsecured	62	69	59

### 18.20 Assets, liabilities and shareholders' equity of mortgage companies, 1980-82 (million dollars) (concluded)

Item	1980	1981	1982	Item	1980	1981	1982
<b>Assets (concluded)</b>				<b>Liabilities</b>			
Collateral business loans				Foreign currency	1	—	—
Loans with investment dealers	3	15	5	Banks outside Canada	—	—	—
Other	236	242	294	Other notes and loans payable			
Other loans	—	—	—	Promissory notes			
Lease contracts	61	101	90	Less than one year	532	871	3,262
Accounts receivable and accruals	159	351	390	One year or more	1,566	1,746	1,439
Refundable taxes	2	—	—	Other	6	5	5
Fixed assets	33	37	35	Accounts payable and accruals	443	547	1,339
Real estate held for sale	33	30	52	Income taxes	—3	2	2
Unamortized debt discount and expense	13	34	39	Owing to parent and affiliated companies			
Other assets	38	46	40	In Canada	521	1,431	2,005
Total, assets	16,075	21,017	28,681	Outside Canada	9	8	8
Liabilities				Debentures issued under trust indenture	1,386	1,119	955
Demand deposits				Deferred income	49	79	65
Chequing	81	69	88	Mortgages payable	15	20	23
Non-chequing	496	455	470	Deferred income taxes	88	106	106
For RRSP	4	6	10	Other liabilities	56	58	53
For RHOSP	1	—	—	Shareholders' equity			
Other tax shelters	—	—	—	Share capital			
Term deposits with original term of				Preferred	548	415	528
Less than one year	338	1,219	1,495	Common	217	370	492
One to five years	8,281	11,155	14,930	Contributed surplus	116	89	123
Over five years	843	826	805	Mortgage and investment reserves	2	1	3
For RRSP	31	40	46	General reserve	74	76	76
For RHOSP	2	2	3	Retained earnings	247	258	320
Other tax shelters	—	—	—	Total, liabilities and shareholders' equity	16,075	21,017	28,681
Bank loans							
Chartered banks							
Canadian currency	128	44	30				

### 18.21 Assets and liabilities of small loans companies and money-lenders, 1979<sup>1</sup> (thousand dollars)

Assets	1979	Liabilities	1979
Small loans balances	156,427	Borrowed money	920,630
Balances, large loans and conditional sales agreements	1,061,475	Unearned charges on large loans and conditional sales agreements	133,773
Cash	8,405	Reserves for losses	50,598
Other	263,487	Paid-up capital	140,973
		Surplus paid in by shareholders	42,728
		Earned surplus	178,827
		Other	22,265
Total, assets	1,489,794	Total, liabilities	1,489,794

<sup>1</sup>Last publication in 1979.

### 18.22 Estimated liabilities<sup>1</sup> of bankruptcies and insolvencies, 1979-82 (thousand dollars)

Province or territory	1979	1980	1981	1982
Newfoundland	10,151.0	4,379.4	5,804.5	13,442.0
Nova Scotia	7,517.0	10,154.5	20,029.5	53,662.1
Prince Edward Island	312.0	360.0	1,724.5	3,312.5
New Brunswick	2,848.0	5,330.5	14,614.5	24,862.1
Quebec	252,908.6	314,576.0	509,108.2	836,255.5
Ontario	195,560.9	287,753.2	341,290.1	664,865.0
Manitoba	7,142.5	13,960.5	39,401.5	66,344.5
Saskatchewan	8,735.5	11,346.5	15,453.5	33,016.5
Alberta	46,655.0	70,156.5	91,972.0	206,298.5
British Columbia	84,424.0	64,684.0	106,102.5	413,846.5
Yukon	600.0	—	376.0	14,283.0
Northwest Territories	207.0	265.0	222.5	112.0
Canada	617,061.4	782,966.1	1,146,099.2	2,330,299.8

<sup>1</sup>Estimated by debtors and therefore to be accepted with reservations.

## 18.23 Bankruptcies and insolvencies, by industry and region, 1979-82

Year and industry	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Total <sup>1</sup>	Total liabilities <sup>2</sup> , \$'000
1979							
Primary industries	6	30	78	37	47	199	28,817
Manufacturing	—	16	5	5	6	32	4,153
Foods and beverages	—	8	8	—	1	18	1,373
Textiles	1	29	6	1	2	38	11,238
Clothing	—	51	32	6	24	116	13,696
Wood	3	29	27	4	8	66	4,664
Paper and allied industries	—						
Primary and fabricated metal, machinery, transportation equipment, electrical products and non-metallic mineral products	4	85	70	10	16	187	19,923
Chemical	1	3	5	—	2	11	1,309
Other manufacturing industries	—	26	38	5	1	70	13,048
Construction							
General contractors	5	82	147	77	73	386	57,247
Special trade contractors	13	281	330	81	75	781	80,145
Transportation, communication and other utilities	6	82	136	51	70	345	21,355
Trade							
Food	10	129	118	23	30	310	29,259
General merchandise	4	44	73	13	5	139	9,959
Automotive products and machinery	5	159	175	57	61	459	39,441
Apparel and shoes	1	110	77	15	21	224	17,326
Hardware	—	19	21	8	4	52	5,474
Household furniture and appliances	2	65	78	30	31	206	17,391
Drugs	1	10	5	8	5	22	2,701
Other trades	22	193	163	40	56	482	42,684
Finance, insurance and real estate	1	62	84	18	38	203	58,715
Services							
Education, health and welfare	—	48	25	4	3	81	17,428
Recreational	2	31	40	7	8	88	9,138
Business	6	97	88	13	12	217	24,221
Personal	2	43	77	9	20	151	10,198
Other services	22	338	321	53	68	804	75,710
Other	2	1	4	—	—	7	453
Total, all industries	119	2,071	2,231	475	687	5,694	617,061
1980							
Primary industries	14	80	138	48	30	311	44,367
Manufacturing	2	21	14	5	3	47	3,762
Foods and beverages	2	23	9	—	2	34	3,605
Textiles	—	15	11	3	—	29	4,040
Clothing	1	50	25	10	10	97	13,153
Wood	1	33	30	4	3	70	5,296
Paper and allied industries							
Primary and fabricated metal, machinery, transportation equipment, electrical products and non-metallic mineral products	5	36	79	11	11	142	30,590
Chemical	—	1	5	3	—	9	1,287
Other manufacturing industries	2	66	24	10	2	104	33,791
Construction							
General contractors	3	60	138	65	47	313	47,557
Special trade contractors	11	327	474	114	62	988	103,099
Transportation, communication and other utilities	14	137	165	62	52	431	34,297
Trade							
Food	12	85	104	27	17	246	29,289
General merchandise	4	45	65	9	5	128	11,609
Automotive products and machinery	14	171	201	58	38	482	39,239
Apparel and shoes	2	147	112	24	14	299	19,180
Hardware	2	13	19	12	5	51	4,262
Household furniture and appliances	5	49	108	18	19	199	21,646
Drugs	—	5	8	2	1	16	1,633
Other trades	16	383	187	77	36	699	82,697
Finance, insurance and real estate	8	85	104	29	28	254	94,244
Services	2	34	31	3	2	72	6,414
Recreational	2	29	48	10	10	99	9,415

## 18.23 Bankruptcies and insolvencies, by industry and region, 1979-82 (continued)

Year and industry	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Total <sup>1</sup>	Total liabilities <sup>1,2</sup> \$'000
Business	8	64	124	19	17	232	33,515
Personal	6	29	56	16	14	121	6,990
Other services	33	612	343	70	54	1,113	97,308
Other	5	5	—	4	—	9	686
Total, all industries	169	2,605	2,622	713	482	6,595	782,966
1981							
Primary industries	17	103	174	70	55	419	75,370
Manufacturing							
Foods and beverages	5	27	12	5	8	57	6,791
Textiles	5	13	8	2	—	28	11,988
Clothing	2	25	13	4	1	45	18,547
Wood	2	49	36	16	8	111	21,524
Paper and allied industries	3	31	31	4	7	76	5,345
Primary and fabricated metal, machinery, transportation equipment, electrical products and non-metallic mineral products	6	68	93	29	16	212	49,404
Chemical	1	11	4	1	—	17	845
Other manufacturing industries	27	73	23	9	3	135	57,567
Construction							
General contractors	6	74	114	61	48	304	49,166
Special trade contractors	24	397	464	156	59	1,100	132,173
Transportation, communication and other utilities	22	144	226	124	32	551	45,165
Trade							
Food	26	136	95	26	9	292	33,535
General merchandise	12	55	62	6	3	138	10,166
Automotive products and machinery	24	242	256	99	43	665	77,843
Apparel and shoes	7	149	116	28	18	318	30,059
Hardware	2	14	26	11	4	57	5,667
Household furniture and appliances	3	60	101	25	21	210	18,385
Drugs	—	4	2	3	2	11	1,299
Other trades	6	491	228	96	47	869	102,224
Finance, insurance and real estate	9	92	111	36	14	262	110,384
Services							
Education, health and welfare	4	54	75	10	9	152	23,803
Recreational	6	62	67	22	11	168	30,957
Business	11	93	130	34	22	291	48,495
Personal	4	57	65	20	8	154	8,123
Other services	47	777	366	127	53	1,374	166,651
Other	25	5	3	6	—	39	4,628
Total, all industries	306	3,306	2,901	1,030	501	8,055	1,146,099
1982							
Primary industries	23	202	221	107	77	631	125,329
Manufacturing							
Foods and beverages	3	41	26	12	8	90	30,713
Textiles	3	12	10	2	—	27	3,946
Clothing	—	75	11	4	5	95	42,637
Wood	7	93	55	9	42	206	77,349
Paper and allied industries	2	49	54	10	9	124	20,884
Primary and fabricated metal, machinery, transportation equipment, electrical products and non-metallic mineral products	7	102	123	32	45	309	126,378
Chemical	1	10	5	2	2	20	5,956
Other manufacturing industries	9	71	39	4	13	136	69,343
Construction							
General contractors	8	59	161	106	78	414	104,214
Special trade contractors	17	447	485	197	98	1,247	205,386
Transportation, communication and other utilities	30	189	277	182	85	766	110,620
Trade							
Food	13	226	121	65	34	460	55,462
General merchandise	11	31	72	5	8	127	20,937
Automotive products and machinery	30	353	290	116	103	893	203,331

**18.23 Bankruptcies and insolvencies, by industry and region, 1979-82 (concluded)**

Year and industry	Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Total <sup>1</sup>	Total liabilities <sup>1,2</sup> \$'000
Apparel and shoes	10	187	126	27	39	389	64,223
Hardware	4	39	28	18	9	98	20,964
Household furniture and appliances	5	85	143	40	35	308	87,657
Drugs	—	12	12	4	2	30	14,901
Other trades	27	537	244	98	70	978	187,091
Finance, insurance and real estate	21	157	204	75	76	533	278,418
Services							
Education, health and welfare	3	77	83	17	8	188	37,411
Recreational	9	61	77	26	14	187	24,146
Business	22	159	196	58	34	469	108,229
Personal	10	83	71	11	22	197	12,282
Other services	55	1,004	471	163	126	1,821	287,854
Other	8	7	2	5	—	22	4,648
Total, all industries	338	4,368	3,607	1,395	1,042	10,765	2,330,300

<sup>1</sup>Includes Yukon and Northwest Territories.<sup>2</sup>Totals may not add due to rounding.**18.24 Total consumer bankruptcies reported, calendar years, 1979-82**

Year and province and territory	Total estates	Total assets \$'000	Total liabilities \$'000	Total deficiency \$'000
1979				
Newfoundland	167	885.3	3,329.0	2,443.8
Prince Edward Island	16	45.7	370.0	324.3
Nova Scotia	538	3,114.8	10,725.5	7,610.7
New Brunswick	207	1,226.4	4,304.2	3,077.8
Quebec	5,410	18,426.6	81,151.1	62,724.6
Ontario	8,318	55,119.0	183,232.5	128,113.5
Manitoba	713	5,455.9	15,092.8	9,636.9
Saskatchewan	267	2,463.6	5,619.5	3,156.0
Alberta	1,037	7,136.1	20,239.5	13,103.4
British Columbia	1,198	7,982.8	21,712.0	13,729.3
Yukon	2	1.5	27.0	25.5
Northwest Territories	3	11.5	42.5	31.0
Canada	17,876	101,869.0	345,845.5	243,976.6
1980				
Newfoundland	186	1,159.9	2,918.0	1,758.1
Prince Edward Island	22	186.3	523.0	336.7
Nova Scotia	574	4,263.7	11,338.1	7,074.4
New Brunswick	160	1,133.3	3,225.6	2,092.4
Quebec	6,144	22,912.8	86,185.5	63,272.8
Ontario	10,384	77,520.9	242,106.7	164,585.9
Manitoba	829	6,972.1	19,137.0	12,164.9
Saskatchewan	326	5,078.4	9,285.0	4,206.7
Alberta	1,308	11,576.9	25,749.0	14,172.2
British Columbia	1,083	4,130.8	14,743.0	10,612.3
Yukon	8	16.9	95.5	78.6
Northwest Territories	1	..	..	—
Canada	21,025	134,951.7	415,306.4	280,354.7
1981				
Newfoundland	251	1,579.5	4,337.0	2,757.5
Prince Edward Island	26	198.6	558.5	359.9
Nova Scotia	675	3,718.8	14,145.5	10,426.8
New Brunswick	199	1,995.0	5,892.5	3,897.6
Quebec	7,031	29,271.8	111,386.9	82,115.1
Ontario	11,260	69,800.9	221,302.5	151,501.7
Manitoba	877	6,440.5	18,836.0	12,395.6
Saskatchewan	289	4,103.0	6,803.0	2,700.0
Alberta	1,441	11,093.2	26,402.5	15,309.3
British Columbia	979	3,494.5	15,611.7	12,117.2
Yukon	2	3.0	217.0	214.0
Northwest Territories	6	52.4	142.5	90.2
Canada	23,036	131,750.9	425,635.6	293,884.7
1982				
Newfoundland	339	2,425.8	6,426.5	4,000.7
Prince Edward Island	35	612.4	1,357.0	744.7
Nova Scotia	911	6,738.2	20,537.0	13,798.8

**18.24 Total consumer bankruptcies reported, calendar years, 1979-82 (concluded)**

Year and province and territory	Total estates	Total assets \$'000	Total liabilities \$'000	Total deficiency \$'000
New Brunswick	335	4,000.4	11,097.0	7,096.6
Quebec	8,878	88,493.7	327,672.1	239,178.5
Ontario	14,301	178,346.3	552,422.6	374,076.3
Manitoba	1,114	19,851.5	42,854.2	23,002.7
Saskatchewan	507	13,473.6	25,317.2	11,843.6
Alberta	2,123	54,466.4	126,465.5	71,999.1
British Columbia	2,085	48,679.2	141,439.0	92,759.8
Yukon	12	102.1	359.5	257.4
Northwest Territories	3	9.4	95.0	85.7
Canada	30,643	417,198.8	1,256,042.5	838,843.7

**18.25 Summary statistics<sup>1</sup> of estates closed during 1980-82, under the Bankruptcy Act**

Year and item		Atlantic provinces	Quebec	Ontario	Prairie provinces	British Columbia	Total
<b>1980</b>							
Bankrupt estates							
Estates closed	No.	848	4,888	7,016	2,194	1,367	16,313
Assets as declared by debtors	\$'000	10,739.1	56,527.2	88,606.1	37,656.5	26,751.6	220,280.4
Liabilities as declared by debtors	"	35,013.6	185,315.3	288,266.1	98,413.8	78,193.7	685,202.3
Realization by trustees	"	1,545.3	21,278.3	17,675.3	10,096.9	5,751.3	56,346.9
Costs of administration	"	955.7	15,357.0	12,075.2	5,934.7	2,993.5	37,315.9
Costs as percentage of realization	%	62	72	68	58	52	66
Paid to creditors	\$'000	589.6	5,921.4	5,600.1	4,162.2	2,757.8	19,031.0
Average percentage received by creditors	%	2	3	2	4	3	3
Proposals							
Proposals closed	No.	19	45	34	10	33	141
Liabilities as declared by debtors	\$'000	2,620.2	14,209.6	10,447.3	6,355.2	4,339.2	37,971.4
Paid to creditors	"	732.4	1,922.9	1,295.2	853.5	913.6	5,717.5
<b>1981</b>							
Bankrupt estates							
Estates closed	No.	889	5,317	7,795	2,516	1,886	18,403
Assets as declared by debtors	\$'000	7,709.1	75,610.0	101,734.0	42,607.4	35,691.9	263,352.6
Liabilities as declared by debtors	"	24,954.5	238,104.8	324,378.8	106,143.6	120,691.8	814,273.6
Realization by trustees	"	1,314.8	19,887.6	20,860.7	7,495.5	6,273.5	55,832.3
Costs of administration	"	637.7	11,021.3	11,684.6	3,747.4	3,407.0	30,498.1
Costs as percentage of realization	%	49	56	56	50	54	55
Paid to creditors	\$'000	677.1	8,866.3	9,176.1	3,748.1	2,866.5	25,334.1
Average percentage received by creditors	%	3	3	3	4	2	3
Proposals							
Proposals closed	No.	11	76	35	12	37	171
Liabilities as declared by debtors	\$'000	450.0	22,427.1	6,655.2	2,215.0	22,713.3	54,460.7
Paid to creditors	"	151.4	3,627.8	1,454.6	291.5	2,289.9	7,815.3
<b>1982</b>							
Bankrupt estates							
Estates closed	No.	971	6,995	13,033	3,371	1,477	25,807
Assets as declared by debtors	\$'000	9,724.3	107,909.2	180,714.2	57,320.2	28,590.1	384,258.1
Liabilities as declared by debtors	"	30,088.7	337,291.4	613,971.7	148,434.0	115,559.5	1,245,345.4
Realization by trustees	"	1,594.5	26,292.7	37,891.6	9,703.0	15,169.5	90,651.4
Costs of administration	"	805.7	14,805.7	17,068.1	4,704.6	5,203.8	42,588.0
Costs as percentage of realization	%	51	56	45	49	34	47
Paid to creditors	\$'000	788.8	11,486.9	20,823.5	4,998.3	9,965.6	48,063.3
Average percentage received by creditors	%	3	3	3	3	9	4
Proposals							
Proposals closed	No.	24	93	43	12	46	218
Liabilities as declared by debtors	\$'000	1,401.6	34,735.8	30,331.1	2,494.0	15,169.5	84,132.2
Paid to creditors	"	518.0	11,769.0	3,126.4	1,297.8	1,088.4	17,799.6

<sup>1</sup>Excludes Small Debtor Program.

### 18.26 Life insurance effected and in force in Canada by insurance companies under federal registration, selected years, 1880-1982 (million dollars)

Year	New insurance effected during year	Amounts in force Dec. 31			Total
		Canadian	British	Foreign	
1880	14	38	20	34	91
1900	68	267	39	124	431
1920	630	1,664	77	916	2,657
1940	590	4,609	146	2,221	6,975
1960	5,693	30,418	1,555	12,676	44,649
1970	12,915	76,775	5,727	28,615	111,116
1974	25,488	128,178	8,785	40,157	177,120
1975	32,526	151,974	10,476	45,629	208,079
1976	36,016	179,083	11,962	51,645	242,690
1977	41,864	210,062	13,546	53,631	278,139
1978	45,037	239,800	15,024	58,609	313,433
1979	50,807	273,214	17,318	66,946	357,478
1980	57,332	309,454	20,465	73,128	403,047
1981	70,818	358,087	24,182	83,299	465,568
1982	85,468	394,822	27,348	90,332	512,502

### 18.27 Amounts of ordinary<sup>1</sup> and group life insurance policies effected and in force in Canada by federally registered companies, 1979-81 (million dollars)

Policies	Canadian			British			Foreign		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
Effected during year									
Ordinary <sup>1</sup>	19,230	22,276	29,247	2,559	3,710	4,645	6,020	7,406	9,385
Group	18,090	19,315	21,902	715	630	838	4,193	3,995	4,801
In force Dec. 31									
Ordinary <sup>1</sup>	99,730	112,253	128,668	12,248	14,488	17,188	32,434	35,192	39,713
Group	173,484	197,201	229,419	5,070	5,977	6,994	34,512	37,936	43,586

<sup>1</sup>Includes industrial policies.

### 18.28 Life insurance premiums (direct written), by province, 1979-82 (million dollars)

Province or territory	1979			1980		
	Ordinary <sup>1</sup>	Group	Total	Ordinary <sup>1</sup>	Group	Total
Newfoundland	22	12	34	24	12	36
Prince Edward Island	6	3	9	7	2	9
Nova Scotia	60	25	85	64	26	90
New Brunswick	45	16	61	48	18	66
Quebec	554	240	794	576	250	826
Ontario	771	329	1,100	816	366	1,182
Manitoba	78	30	108	83	36	119
Saskatchewan	62	28	90	66	31	97
Alberta	168	67	235	196	76	272
British Columbia	181	82	263	196	89	285
Yukon and Northwest Territories	3	1	4	3	1	4
Miscellaneous	21	3	24	22	2	24
Total	1,971	836	2,807	2,101 <sup>1</sup>	909	3,010
	1981			1982		
	Life	Accident and sickness total <sup>2</sup>		Life	Accident and sickness total <sup>2</sup>	
	Ordinary <sup>1</sup>	Group	Total	Ordinary <sup>1</sup>	Group	Total
Newfoundland	26	17	43	28	14	42
Prince Edward Island	8	3	11	7	3	11
Nova Scotia	67	31	99	71	31	102
New Brunswick	52	21	73	55	21	76

**18.28 Life insurance premiums (direct written), by province, 1979-82 (million dollars) (concluded)**

Province or territory	1981				1982			
	Life			Accident and sickness total <sup>2</sup>	Life			Accident and sickness total <sup>2</sup>
	Ordinary <sup>1</sup>	Group	Total		Ordinary <sup>1</sup>	Group	Total	
Quebec	623	302	925	438	640	298	938	475
Ontario	876	426	1,302	884	905	451	1,356	1,020
Manitoba	90	43	133	59	97	45	142	67
Saskatchewan	71	36	107	38	75	39	114	43
Alberta	239	102	341	169	239	114	353	198
British Columbia	223	114	337	202	228	119	347	209
Yukon and Northwest Territories	2	3	5	3	3	2	5	3
Miscellaneous	25	9	34	8	23	7	30	2
Total	2,303	1,107	3,410	1,923	2,372	1,144	3,516	2,152

<sup>1</sup>Includes industrial policies.<sup>2</sup>Not available for 1979 and 1980.**18.29 Major assets and liabilities of federally registered life insurance companies, as at Dec. 31, 1979-81 (million dollars)**

Assets and liabilities	Life insurance								
	Canadian <sup>1</sup>			British <sup>2</sup>			Foreign <sup>2</sup>		
	1979	1980	1981	1979	1980	1981	1979	1980	1981
<b>Assets</b>									
Bonds	12,180	13,697	15,758	1,046	1,286	1,252	2,106	2,461	2,875
Stocks	2,635	2,980	3,257	236	239	251	71	97	116
Mortgages <sup>3</sup>	12,589	14,145	15,534	868	961	1,025	1,940	2,063	2,158
Real estate and ground rents	1,941	2,213	2,609	131	166	205	76	75	98
Policy loans	2,275	2,715	3,395	114	136	163	238	278	352
Other assets	1,506	1,597	2,399	295	266	371	220	269	359
Segregated	4,877	5,995	6,237	844	1,141	1,046	120	141	136
<b>Total<sup>4</sup></b>	<b>38,003</b>	<b>43,342</b>	<b>49,189</b>	<b>3,534</b>	<b>4,195</b>	<b>4,313</b>	<b>4,771</b>	<b>5,384</b>	<b>6,094</b>
<b>Liabilities</b>									
Actuarial reserves	24,232	27,440	31,918	2,213	2,400	2,610	3,330	3,559	3,761
Outstanding claims	333	367	393	13	20	19	57	67	64
Amounts on deposit	1,949	2,133	2,318	13	17	18	252	271	259
Other liabilities	3,790	4,256	4,883 <sup>5</sup>	115	161	178	558	790	972
Segregated	4,859	5,972	6,215	853	1,182	1,056	90	117	115
<b>Total</b>	<b>35,163</b>	<b>40,168</b>	<b>45,727</b>	<b>3,207</b>	<b>3,780</b>	<b>3,881</b>	<b>4,287</b>	<b>4,804</b>	<b>5,171</b>
<b>Surplus or excess<sup>6</sup></b>	<b>2,792</b>	<b>3,127</b>	<b>3,385</b>	<b>327</b>	<b>415</b>	<b>432</b>	<b>484</b>	<b>580</b>	<b>923</b>
Capital stock	48	47	77	—	—	—	—	—	—
<b>1981 Accident and sickness insurance</b>									
Assets	Canadian <sup>1</sup>			British <sup>2</sup>	Foreign <sup>2</sup>		Liabilities		
							Canadian <sup>1</sup>	British <sup>2</sup>	Foreign <sup>2</sup>
Bonds	1,124	3	590				1,467	2	312
Stocks	143	—	—				363	—	48
Mortgages <sup>3</sup>	839	—	3				136	—	5
Real estate and ground rents	—	—	—				843	1	179
Policy loans	...	...	...				...	...	...
Other assets	558	1	108				...	...	...
Segregated	...	...	...				...	...	...
<b>Total<sup>4</sup></b>	<b>2,664</b>	<b>4</b>	<b>701</b>				<b>2,809</b>	<b>3</b>	<b>544</b>
<b>Surplus or excess<sup>6</sup></b>							<b>- 152</b>	<b>1</b>	<b>157</b>
Capital stock							<b>7</b>	<b>...</b>	<b>...</b>

<sup>1</sup>Assets at book values, in and out of Canada (segregated funds at market values).<sup>2</sup>Assets at book values in Canada only.<sup>3</sup>Mortgages include agreements of sale.<sup>4</sup>Includes assets under control of Chief Agent in Canada (British and Foreign only).<sup>5</sup>Includes \$2,445 million appropriated surplus (reserve requested by department, \$1,000 million and \$1,445 million other reserve) previously included in liabilities (Canadian only).<sup>6</sup>Excess of assets over liabilities in Canada for British and foreign companies; for such companies, "capital stock" is not applicable in Canada.

### 18.30 Major items of income and expenditure of federally registered life insurance companies, 1979-82 (million dollars)

Income and expenditure	Canadian	British <sup>1</sup>	Foreign <sup>1</sup>	Canadian	British <sup>1</sup>	Foreign <sup>1</sup>
	1979			1980		
Income						
Insurance premiums and annuity considerations	5,942	446	674	6,830	556	714
Investment income - regular funds	2,660	247	362	3,203	290	429
Net investment gain - segregated funds	579	151	16	790	238	12
Other items	216	57	62	200	37	41
Total income	9,397	901	1,114	11,023	1,121	1,196
Selected expenditure						
Claims incurred	2,795	257	358	3,502	290	371
Dividends to policyholders	535	45	121	610	50	131
Commissions and general expenses	1,240	94	184	1,404	106	195
Taxes, licences and fees	68	8	40	75	13	37
	1981 Life			1982 Life		
Income						
Insurance premiums and annuity considerations	8,985 <sup>2</sup>	601	817	9,418 <sup>2</sup>	706	796
Investment income - regular funds	3,852	347	526	4,528	410	599
Net investment gain - segregated funds	117	-35	-7	1,326	174	5
Other items	206	—	10	202	44	11
Total income	13,160	913	1,346	15,474	1,334	1,411
Selected expenditure						
Claims incurred	4,905	525	420	5,448	4,887	479
Dividends to policyholders	890	63	154	980	61	179
Commissions and general expenses	1,707	131	236	1,945	155	260
Taxes, licences and fees	83 <sup>3</sup>	11	16	90 <sup>3</sup>	16	16
	1981 Accident and sickness			1982 Accident and sickness		
Income						
Insurance premiums and annuity considerations	2,256	2	385	2,437	18	427
Investment income - regular funds	210	—	59	275	5	71
Net investment gain - segregated funds	—	—	—	—	—	—
Other items	2	—	2	10	—	-1
Total income	2,468	2	446	2,722	23	497
Selected expenditure						
Claims incurred	1,856	—	303	2,047	8	349
Dividends to policyholders	67	—	14	67	—	5
Commissions and general expenses	280	1	83	321	7	103
Taxes, licences and fees	47	—	9	54	—	9

<sup>1</sup>Business in Canada only.

<sup>2</sup>Worldwide business of which \$2,513 million in 1981 and \$3,102 million in 1982 was applicable to out-of-Canada business.

<sup>3</sup>Includes income taxes.

### 18.31 Property and casualty net premiums written and net claims incurred, by class of insurance and by incorporation of company, 1979-82 (million dollars)

Year and insurance class	Net premiums written				Net claims incurred <sup>1</sup>
	Canadian	British	Foreign	Total	
1979					
Property <sup>2</sup>	1,006	193	446	1,645	1,008
Automobile	1,421	102	398	1,921	1,475
Liability	214	27	94	335	186
Accident and sickness	1,103	35	356	1,494	1,292
Other casualty <sup>3</sup>	138	32	63	233	130
Marine	18	6	16	40	29
Total	3,900	395	1,373	5,668	4,120

### 18.31 Property and casualty net premiums written and net claims incurred, by class of insurance and by incorporation of company, 1979-82 (million dollars) (concluded)

Year and insurance class	Net premiums written				Net claims incurred <sup>1</sup>
	Canadian	British	Foreign	Total	
1980					
Property <sup>2</sup>	1,140	205	462	1,807	1,248
Automobile	1,565	113	439	2,117	1,719
Liability	237	31	99	367	191
Accident and sickness	1,316	38	389	1,743	1,531
Other casualty <sup>3</sup>	129	40	61	230	144
Marine	26	6	11	43	33
Total	4,413	433	1,461	6,307	4,866
1981					
Property <sup>2</sup>	1,333	228	504	2,065	1,484
Automobile	1,855	147	498	2,500	2,099
Liability	253	34	109	396	265
Accident and sickness	80	46	37	163	110
Other casualty <sup>3</sup>	135	46	68	249	158
Marine	29	6	16	51	37
Total	3,685	507	1,232	5,424	4,153
1982					
Property <sup>2</sup>	1,445	264	592	2,301	1,521
Automobile	2,001	193	676	2,870	2,112
Liability	263	38	110	411	344
Accident and sickness	144	38	27	209	175
Other casualty <sup>3</sup>	124	49	71	244	206
Marine	28	6	14	48	42
Total	4,005	588	1,490	6,083	4,400

<sup>1</sup>Includes adjustment expenses.

<sup>2</sup>Includes fire, personal property, real property, windstorm, earthquake, inland transportation, livestock, theft, forgery, plate glass.

<sup>3</sup>Includes hail, fidelity, surety, boiler and machinery, aircraft, credit, legal expenses, mortgage.

### 18.32 Property and casualty direct premiums written and claims incurred, by province and by category of company, 1979-82 (million dollars)

Year and province or territory	Premiums written			Claims incurred
	Companies federally registered <sup>1</sup>	Companies provincially licensed	Total	
1979				
Newfoundland	75	19	94	71
Prince Edward Island	28	2	30	15
Nova Scotia	197	1	198	127
New Brunswick	185	8	193	129
Quebec	1,444	746	2,190	1,636
Ontario	2,545	378	2,923	2,146
Manitoba	148	142	290	202
Saskatchewan	94	102	196	134
Alberta	740	85	825	515
British Columbia	531	450	981	717
Yukon and Northwest Territories	25	2	25	14
Canada	6,012	1,933	7,945	5,706
1980				
Newfoundland	90	14	104	63
Prince Edward Island	27	2	29	17
Nova Scotia	212	1	213	153
New Brunswick	193	9	202	149
Quebec	1,546	803	2,349	2,021
Ontario	2,825	424	3,249	2,470
Manitoba	152	156	308	240
Saskatchewan	105	114	219	148
Alberta	867	107	974	731
British Columbia	556	520	1,076	869
Yukon and Northwest Territories	26	1	27	20
Canada	6,599	2,151	8,750	6,881

### 18.32 Property and casualty direct premiums written and claims incurred, by province and by category of company, 1979-82 (million dollars) (concluded)

Year and province or territory	Premiums written			Claims incurred
	Companies federally registered <sup>1</sup>	Companies provincially licensed	Total	
1981	74	20	94	60
Newfoundland	24	3	27	19
Prince Edward Island	190	1	191	147
Nova Scotia	167	14	181	140
New Brunswick	1,406	1,016	2,422	1,979
Quebec	2,331	335	2,666	2,045
Ontario	115	189	304	224
Manitoba	91	297	388	158
Saskatchewan	869	111	980	831
Alberta	431	677	1,108	876
British Columbia	23	2	25	22
Yukon and Northwest Territories				
Canada	5,721	2,665	8,386	6,501
1982	72	23	95	86
Newfoundland	26	1	27	18
Prince Edward Island	208	2	208	146
Nova Scotia	172	17	189	129
New Brunswick	1,647	958	2,605	1,780
Quebec	2,646	591	3,237	2,393
Ontario	122	205	327	260
Manitoba	99	157	256	198
Saskatchewan	976	129	1,105	808
Alberta	453	770	1,223	1,075
British Columbia	24	2	26	23
Yukon and Northwest Territories				
Canada	6,445	2,853	9,298	6,916

<sup>1</sup>Includes Lloyd's, now federally registered.

<sup>2</sup>Less than \$500,000.

### 18.33 Major assets and liabilities of federally registered property and casualty insurance companies, 1979-82 (million dollars)

Assets and liabilities	Canadian <sup>1</sup>	British <sup>2</sup>	Foreign <sup>2</sup>	Canadian <sup>1</sup>	British <sup>2</sup>	Foreign <sup>2</sup>
	1979			1980		
Assets						
Bonds	3,218	459	2,448	3,645	502	2,601
Stocks	1,123	77	66	1,336	79	84
Amounts due from agents and premiums receivable	571	36	176	655	37	183
Other	2,666	180	618	2,965	176	663
Total	7,578	752 <sup>3</sup>	3,308 <sup>3</sup>	8,601	794 <sup>3</sup>	3,531 <sup>3</sup>
Liabilities						
Unearned premiums	1,552	142	676	1,745	155	691
Unpaid claims	3,222	318	1,125	3,733	310	1,170
Other	997	41	238	1,114	45 <sup>4</sup>	239 <sup>4</sup>
Total	5,771	501	2,039	6,592	510	2,100
Statutory reserves (including general and contingency reserves)	399	26	377	526	28	495
Surplus or excess <sup>5</sup>	908	225 <sup>6</sup>	892 <sup>6</sup>	856	256 <sup>6</sup>	936 <sup>6</sup>
Capital stock and amounts transferred	500	...	...	627	...	...
	1981			1982		
Assets						
Bonds	2,892	499	2,225	3,228	539	2,462
Stocks	1,214	95	111	1,309	64	121
Amounts due from agents and premiums receivable	540	48	199	594	57	248
Other	2,359	165	701	2,515	180	776
Total	7,005	807 <sup>3</sup>	3,236 <sup>3</sup>	7,646	840 <sup>3</sup>	3,607 <sup>3</sup>

**18.33 Major assets and liabilities of federally registered property and casualty insurance companies, 1979-82 (million dollars) (concluded)**

Assets and liabilities	Canadian <sup>1</sup>	British <sup>2</sup>	Foreign <sup>2</sup>	Canadian <sup>1</sup>	British <sup>2</sup>	Foreign <sup>2</sup>
Liabilities						
Unearned premiums	1,900	186	681	2,018	219	771
Unpaid claims	2,485	359	1,003	2,687	314	1,066
Other	757	48	225	848	58 <sup>4</sup>	251 <sup>4</sup>
Total	5,142	593	1,909	5,553	591	2,088
Statutory reserves (including general and contingency reserves)	465	37	472	332	31	342
Surplus or excess <sup>5</sup>	879	177 <sup>6</sup>	855 <sup>6</sup>	1,204	218 <sup>6</sup>	1,177 <sup>6</sup>
Capital stock and amounts transferred	519	...	...	557	...	...

<sup>1</sup>Business in and out of Canada, investments on book value basis.

<sup>2</sup>Business in Canada only, investments on book value basis.

<sup>3</sup>Assets for British and Foreign at book value.

<sup>4</sup>In 1980 and 1982, British and foreign property and casualty companies statements are balanced; marine liabilities (British, \$24 million in 1980 and 1982; foreign, \$27 million in 1980 and \$20 million in 1982) are included in "other" liabilities.

<sup>5</sup>Excess of assets over liabilities in Canada for British and foreign companies; for such companies, "capital stock" is not applicable in Canada.

<sup>6</sup>This amount is the Head Office Account in 1979-82.

**18.34 Property and casualty insurance, underwriting results in Canada, 1979-82 with totals for 1975-82 (million dollars)**

Registered companies	Underwriting revenue	Claims <sup>1</sup> incurred	Expenses incurred	Dividends to policyholders	Underwriting income
1979					
Canadian <sup>2</sup>					
Property and casualty A and S branches <sup>3</sup>	2,783.5	1,941.5	944.5	7.0	-109.5
	1,036.4	950.1	133.0	43.8	-90.5
British	398.7	267.2	133.7	—	-2.2
Foreign					
Property and casualty A and S branches <sup>3</sup>	981.7	705.8	336.7	3.6	-64.4
	313.9	246.8	76.3	10.7	-19.9
1980					
Canadian <sup>2</sup>					
Property and casualty A and S branches <sup>3</sup>	3,045.6	2,323.2	1,080.4	5.3	-363.3
	1,218.2	1,121.5	167.3	65.0	-135.6
British	413.9	294.5	147.5	—	-28.1
Foreign					
Property and casualty A and S branches <sup>3</sup>	1,060.9	812.4	359.3	4.3	-115.1
	358.2	299.5	84.6	4.5	-30.4
1981					
Canadian <sup>2</sup>	3,452.6	2,801.4	1,202.2	4.1	-555.1
British	469.4	376.7	167.9	0.7	-75.9
Foreign	1,120.3	960.9	386.3	1.6	-228.5
1982					
Canadian <sup>2</sup>	3,893.0	2,940.0	1,297.6	5.0	-349.6
British	542.9	373.7	183.7	—	-14.5
Foreign	1,383.0	1,068.5	437.6	8.9	-132.0
Total, 1982	5,818.9	4,382.2	1,918.9	13.9	-496.1
1981	5,042.3	4,139.0	1,756.4	6.4	-859.5
1980	6,096.8	4,831.1	1,839.1	79.1	-672.5
1979	5,514.2	4,111.4	1,624.2	65.1	-286.5
1978	5,102.4	3,490.4	1,519.6	104.7	-12.3
1977	4,878.9	3,318.8	1,479.5	112.8	-32.2
1976	4,090.4	2,825.7	1,273.0	73.5	-81.3
1975	3,302.0	2,385.5	1,029.4	47.4	-160.3

<sup>1</sup>Includes adjustment expenses.

<sup>2</sup>Excludes transactions out of Canada.

<sup>3</sup>Accident and sickness branches of life insurance companies (excluded in 1981 and 1982).

Note: All British and Foreign exclude "Marine".

**18.35 Property losses, by province, 1980-82**

Province or territory	Population	Reported fires		Loss		Loss per capita	
		Number	10-year average	\$	10-year average \$	\$	10-year average \$
1980 <sup>1</sup>							
Newfoundland	583,600	1,058	767	12,201,599	10,280,233	20.90	18.39
Prince Edward Island	124,100	428	489	4,523,437	2,382,849	36.44	19.77
Nova Scotia	856,100	3,057	2,181	46,777,781	15,695,388	54.64	18.80
New Brunswick	709,100	1,909	1,318	15,133,569	14,999,254	21.34	21.86
Quebec	6,325,200	22,010	20,896	318,732,125	162,458,713	50.39	22.77
Ontario	8,600,500	26,591	24,723	211,171,073	142,711,246	24.55	17.15
Manitoba	1,027,000	7,472	5,633	48,973,023	24,878,427	47.68	24.34
Saskatchewan	975,700	3,722	2,713	48,932,799	17,675,848	50.15	18.45
Alberta	2,135,900	12,656	8,998	173,015,745	55,041,574	81.00	28.15
British Columbia	2,687,000	6,396	7,518	91,452,060	67,824,875	34.03	27.47
Yukon	21,500	82	101	1,319,205	867,210	61.35	16.10
Northwest Territories	42,800	149	217	6,754,292	3,184,825	157.81	78.40
Canada	24,088,500	85,530	75,555	978,986,708	518,000,442	40.64	22.32
1981 <sup>2</sup>							
Newfoundland	586,600	891	790	15,219,125	11,440,844	25.94	20.29
Prince Edward Island	124,400	627	505	5,129,493	2,770,927	41.23	22.76
Nova Scotia	858,000	2,870	2,269	40,294,590	19,095,723	46.96	22.67
New Brunswick	710,900	1,336	1,335	20,503,938	16,423,379	23.10	23.15
Quebec	6,343,100	19,907	20,453	307,451,806	186,320,628	48.47	26.47
Ontario	8,631,300	25,173	24,897	235,750,619	158,082,624	27.31	18.83
Manitoba	1,031,700	6,696	5,957	36,127,204	27,498,320	35.02	26.73
Saskatchewan	981,100	3,303	2,836	32,205,813	20,311,180	32.83	21.22
Alberta	2,465,900	11,161	9,372	84,894,794	61,961,146	34.43	30.63
British Columbia	2,714,900	7,023	7,473	115,992,986	75,952,875	42.72	30.16
Yukon	21,900	113	102	5,853,176	1,386,551	267.26	38.94
Northwest Territories	43,200	163	227	5,998,967	3,691,125	138.86	169.09
Canada	24,213,000	79,263	76,390	905,422,511	585,639,617	37.39	24.96
1982 <sup>3</sup>							
Newfoundland	570,100	955	901	20,401,831	13,030,347	35.79	22.96
Prince Edward Island	122,800	622	515	3,954,528	3,039,107	32.20	24.85
Nova Scotia	853,100	2,589	2,351	29,164,906	21,300,445	34.19	25.19
New Brunswick	699,900	1,160	1,343	19,782,610	17,914,123	28.26	28.26
Quebec	6,486,000	17,437	19,560	293,705,611	207,805,266	45.28	29.69
Ontario	8,723,900	24,450	24,731	225,536,676	172,712,534	25.85	20.40
Manitoba	1,036,100	5,977	6,157	36,209,760	29,654,345	34.95	28.75
Saskatchewan	980,400	3,278	2,953	30,954,730	22,749,757	31.57	23.66
Alberta	2,321,900	11,823	9,797	169,106,157	77,063,049	72.83	36.82
British Columbia	2,793,200	7,623	7,423	157,296,688	87,113,232	56.31	34.13
Yukon	23,700	100	104	1,401,578	1,488,485	59.13	42.84
Northwest Territories	47,400	185	209	11,373,827	4,696,451	239.95	189.41
Canada	24,658,500	76,199	76,121	998,888,902	660,101,844	40.50	27.85

<sup>1</sup>Official census population published by Statistics Canada, December 1980.<sup>2</sup>Official census population published by Statistics Canada, July 1981.<sup>3</sup>Official census population published by Statistics Canada, July 1982.

## 18.36 Fire losses by cause of fire, 1980-82

Reported cause of fire	Fires reported	Property loss \$'000	Injuries		Deaths		Men	Women	Children	Un-classified	Fire-fighter	Men	Women	Children	Un-classified
			Fire-fighter		Fire-fighter										
1980															
Arson or other set fires	11,677	180,122.1	163				84	38	11	168	2	20	13	9	68
Misuse of source of ignition:															
Undetermined	181	5,607.0	—				—	—	—	—	—	3	—	1	—
Smoker's material	4,944	23,565.4	57				172	97	30	—	—	86	38	18	—
Child playing with	2,289	9,513.8	19				22	27	35	—	—	1	1	38	—
Miscellaneous	1,803	86,375.7	66				110	43	33	312	—	23	6	7	72
Misuse of material ignited	3,866	42,464.7	42				210	59	39	42	—	16	15	7	3
Mechanical, electrical failure, malfunction, design or installation deficiency	21,639	255,253.1	157				153	44	77	140	—	25	8	15	24
Misuse of equipment	2,924	29,813.9	27				12	9	5	22	2	5	2	9	4
Human failing:	843	8,538.9	9				12	1	—	4	—	4	—	—	4
Undetermined	7	6.2	—				—	—	—	—	—	—	—	—	—
Asleep	210	976.9	—				13	6	1	—	—	—	4	—	—
Suspected impairment by alcohol, drugs, medication	201	1,045.2	—				14	8	—	—	—	12	2	—	—
Miscellaneous	2,648	13,674.4	10				83	41	12	8	—	14	5	3	3
Vehicle accident	561	5,045.4	—				19	3	2	—	—	19	7	3	1
Miscellaneous	18,526	295,534.6	192				158	69	37	114	3	49	39	35	35
Undetermined	3,211	21,449.5	54				36	22	15	—	—	15	10	22	—
Total	85,530	978,986.7	797				1,098	467	237	810	7	299	150	163	214
1981															
Arson or other set fires	10,927	178,271.9	239				78	29	8	121	1	25	10	3	—
Misuse of source of ignition:															
Undetermined	188	2,295.2	—				—	—	—	—	—	—	—	—	—
Smoker's material	6,438	49,704.0	104				236	113	18	3	—	106	49	6	—
Child playing with	2,378	8,821.5	21				30	25	29	—	—	9	7	11	—
Miscellaneous	8,440	67,200.9	107				140	57	9	346	—	49	23	13	—
Misuse of material ignited	3,658	41,684.3	50				193	77	15	32	—	11	7	2	—
Mechanical, electrical failure, malfunction, design or installation deficiency	20,807	216,799.4	141				142	56	17	134	2	31	27	13	—
Misuse of equipment	2,652	38,384.4	42				22	7	4	15	—	9	8	3	—
Human failing:	897	6,287.4	—				10	9	—	7	—	5	2	1	—
Undetermined	196	1,902.7	—				—	2	—	—	—	—	—	—	—
Asleep	238	1,710.2	1				16	6	2	—	—	3	3	6	—
Suspected impairment by alcohol, drugs, medication	184	1,205.6	1				21	4	2	—	—	16	6	4	—
Miscellaneous	2,411	12,918.2	5				67	45	14	17	—	27	20	2	—
Vehicle accident	321	2,838.0	—				21	3	—	—	—	20	3	4	—
Miscellaneous	16,144	249,814.4	267				166	63	21	122	4	66	32	28	—
Undetermined	3,384	25,584.5	230				32	21	4	1	—	7	—	—	—
Total	79,263	905,422.5	1,208				1,174	517	143	798	8	393	197	96	—

## 18.36 Fire losses by cause of fire, 1980-82 (concluded)

Reported cause of fire	Fires reported	Property loss \$'000	Injuries			Deaths		
			Fire-fighter	Men	Women	Children	Un-classified	Un-classified
1982	9,750	180,527.4	324	130	45	24	—	—
Arson or other set fires								
Misuse of source of ignition:								
Undetermined	241	4,647.8	—	—	—	—	—	—
Smoker's material	6,213	45,228.1	95	193	91	23	—	—
Child playing with	1,967	15,470.6	43	27	31	31	—	9
Miscellaneous	7,656	76,698.8	133	271	130	55	—	24
Misuse of material ignited	3,349	47,935.8	70	219	89	26	—	19
Mechanical, electrical failure, malfunction	19,853	221,616.2	212	253	61	24	—	4
Construction, design or installation deficiency	2,784	33,450.4	40	17	10	3	—	—
Misuse of equipment	769	8,566.8	4	10	4	1	—	—
Human failing:								
Undetermined	85	1,600.5	—	1	—	—	—	—
Asleep	333	2,705.5	5	24	6	1	—	—
Suspected impairment by alcohol, drugs, medication	183	1,961.9	2	25	7	—	—	—
Miscellaneous	3,372	22,906.0	21	116	69	15	—	—
Vehicle accident	281	2,850.3	1	7	—	—	—	—
Miscellaneous	8,857	176,398.1	116	124	29	13	—	—
Undetermined	10,506	156,324.7	219	169	72	12	—	—
Total	76,199	998,888.9	1,285	1,586	644	228	34	132

18.37 Fire losses by type of property, 1980-82

Type of property	1980		1981		1982	
	Fires reported	Property loss \$'000	Fires reported	Property loss \$'000	Fires reported	Property loss \$'000
Residential	40,053	340,469.9	36,593	341,329.8	35,235	385,781.4
Assembly	2,465	94,471.3	2,509	80,714.9	2,211	87,064.6
Institutional	635	8,330.3	582	13,918.1	579	4,110.1
Business and personal services	695	25,824.2	608	18,754.0	614	22,314.4
Mercantile	2,573	105,452.2	2,396	93,807.4	2,290	93,900.4
Manufacturing	2,128	93,934.3	2,032	127,412.1	1,603	110,454.6
Storage	3,391	100,784.2	3,087	69,487.4	2,977	91,834.0
Special properties	28,490	91,505.3	26,901	87,421.5	26,205	103,996.4
Farm properties	1,398	39,983.1	1,298	41,150.0	1,360	46,566.7
Miscellaneous	3,702	78,232.1	3,257	31,427.8	3,125	52,866.5
Total	85,530	978,986.9	79,263	905,422.5	76,199	998,888.9

Sources

- 18.1, 18.2, 18.4, 18.5, 18.8, 18.10, 18.11 Department of Monetary and Financial Analysis, Bank of Canada.  
18.3 Federal Business Development Bank.  
18.6, 18.7 Numismatic Products and Public Relations, Royal Canadian Mint.  
18.9, 18.12, 18.13 Canadian Bankers Association.  
18.14 - 18.21 Business Finance Division, Statistics Canada.  
18.22 - 18.25 Bankruptcy Branch, Department of Consumer and Corporate Affairs.  
18.26 - 18.34 Statement Analysis and Publications Section, Department of Insurance.  
18.35 - 18.37 Office of the Fire Commissioner of Canada, Department of Public Works.



CHAPTER 19

---

**GOVERNMENT**



## OVERVIEW

---

Canada is a parliamentary democracy, a constitutional monarchy. It is a federal state with 10 provinces and two territories and, since the “patriation” of the constitution in 1982, is now fully responsible for its own constitution and any further constitutional change.

The monarch, Queen Elizabeth II, is represented in Canada by a resident appointed Governor General, now traditionally a Canadian. The prime minister is the political party leader who has the support of the majority of candidates elected to the House of Commons and he selects the cabinet (that is, the ministry). The Senate has 104 senators appointed to represent Canada regionally. The House of Commons has 282 members of Parliament elected in districts based on census population counts. In federal elections all Canadians over 18 years old can vote.

Administration of legislation and of government policies is carried out by a non-partisan public service.

Provincial governments follow a version similar to the federal pattern.

## CHAPTER 19

---

# GOVERNMENT

<b>19.1</b>	<b>Organization of the federal government</b>	<b>603</b>
19.1.1	Responsible government	603
<b>19.2</b>	<b>The executive</b>	<b>605</b>
19.2.1	The Crown	605
19.2.2	The Privy Council	606
19.2.3	The prime minister	606
19.2.4	The cabinet	607
<b>19.3</b>	<b>The legislature</b>	<b>608</b>
19.3.1	The Senate	610
19.3.2	The House of Commons	611
<b>19.4</b>	<b>The judiciary</b>	<b>611</b>
<b>19.5</b>	<b>Federal government administration</b>	<b>611</b>
19.5.1	Government employment	611
19.5.2	Departments, boards, commissions and corporations	613
19.5.3	Applied titles	614
<b>19.6</b>	<b>Provincial and territorial governments</b>	<b>614</b>
19.6.1	Provincial governments	614
19.6.2	Territorial governments	615
<b>19.7</b>	<b>Local government</b>	<b>616</b>

## TABLES

19.1	Sessions of Parliaments	619
19.2	Representation in the Senate	620
19.3	The House of Commons	620
19.4-19.6	Federal general elections	620
19.7	Provinces and territories	630
19.8	Municipalities in Canada	630
19.9, 19.10	Government employees	632

## CHART

Chart 19.1	The legislative process	609
------------	-------------------------	-----

## CHAPTER 19

# GOVERNMENT

### 19.1 Organization of the federal government

The Canadian federal state of 10 provinces and two territories had its foundation in an act of the British Parliament, the British North America Act, 1867, renamed the Constitution Act, 1867 by the Constitution Act, 1982. The latter act contains the Canadian Charter of Rights and Freedoms and other new provisions, including the procedure for amending the constitution of Canada. The Constitution Act, 1867 not only established the institutions through which legislative, executive and judicial powers are exercised in Canada but also established a federal form of government. A central government — the federal government — has legislative jurisdiction primarily over matters of national concern and over those matters not assigned to the provinces. The 10 provincial governments are assigned specific areas of legislative jurisdiction, including municipal institutions.

In Canada there is a fusion of executive and legislative powers. Formal executive power is vested in the Queen, whose authority is delegated to the Governor General, her representative. Legislative power is vested in the Parliament of Canada which consists of the Queen, an appointed upper house (the Senate) and a lower house (the House of Commons) elected by universal adult suffrage. The independence of the judiciary is safeguarded through the constitutional provision that superior court judges are appointed by the Governor-in-Council, that is, by the Governor General on advice of the cabinet, and that they hold office during good behaviour and cannot be removed unless both houses of Parliament, the cabinet and the Governor General agree.

#### 19.1.1 Responsible government

In the Canadian system, where the executive is part of Parliament, democratic principles could not be adhered to without the constitutional convention that the government is responsible to the House of Commons.

**Federal elections** are governed by the Canada Elections Act and are held following the dissolution of Parliament. A dissolution of Parliament is a prerogative of the Governor General of Canada, acting on the advice of the prime minister. Parliament

may be dissolved at any time but it has never yet been dissolved prior to meeting at least once. The normal courses of Parliament range from three to four years while an election must be held at least five years from the date of the return of the writs of election. It is a fundamental convention of the Canadian system, in which the executive is part of Parliament, that if the government of the day loses the confidence of the House of Commons, it must resign or the prime minister must ask the Governor General to dissolve Parliament and call a general election.

Although there are conventions that help in deciding when the government has lost the confidence of the house, all doubt is removed when the government is defeated on a motion on which it had explicitly staked its life or when a motion of non-confidence in the government is passed. If the government resigns, the Governor General can call on the leader of the opposition (who is usually the leader of the political party that has the second largest number of seats in the House of Commons) to form a new government. If a government that has lost the confidence of the House of Commons and has been granted a dissolution is defeated in the ensuing general election and if no clear majority is elected, the government has two choices — it can remain in office and seek the confidence of the Commons when it meets or it can resign at once. If it resigns, the Governor General will normally ask the leader of another party, usually the one that has won the most seats, to form a new government. The primary responsibility of the Governor General in either circumstance is to provide the nation with a government capable of carrying on with the support of the House of Commons.

Once Parliament is dissolved the chief electoral officer issues writs of election to returning officers in the various constituencies across Canada. The number of constituencies is based on the general principle of representation according to population. This principle is based on overall provincial populations and the population of individual constituencies can vary. Consequently following each decennial census there is a redistribution of constituencies as well as a general adjustment in the number of seats in the House of Commons to reflect population changes.

Canada has a system of universal suffrage and Parliament is democratically elected. All Canadians above the age of 18 are eligible to vote in federal elections. The electoral system has been modified several times and a recent change was the addition of political parties to the ballots. Another feature of the system: advance polls and proxy voting for individuals not able to vote at their local polling stations on election day.

**Political parties** have developed over time as the political power of legislatures grew and there was a need to establish some stability in government. Canada has a multi-party system and there is no restriction on the number of political parties that may contest federal elections. Those political parties wishing to endorse candidates for an election must register with the office of the chief electoral officer. A new political party wishing to be identified on the ballot paper must have candidates officially nominated in at least 50 electoral districts by the 30th day before polling day.

At various times a number of parties representing a wide spectrum of viewpoints have presented candidates and elected members to Parliament. Following the September 4, 1984 general election four parties were represented in the House of Commons: the Progressive Conservatives, who form the government; the Liberals, who are the official opposition; the New Democratic Party; and one Independent. Political parties are not all organized in the same fashion and their methods of operations have evolved over time in accordance with the wishes of their members. Every political party has a leader who speaks on behalf of the party both within and outside the House of Commons.

The prime minister and the cabinet are generally members of the House of Commons, although some may be senators. They are, formally speaking, the Queen's advisers. In fact virtually no significant actions can be taken by the Queen or her representative in Canada, the Governor General, without cabinet advice. The prime minister and the cabinet determine executive policies and are responsible for them to the House of Commons. The Queen and the Governor General have the traditional rights to be consulted, to encourage and to warn the government.

The needs and wishes of citizens are conveyed primarily to members of Parliament or directly or indirectly to cabinet ministers. Requests for government action may originate from individuals, political parties or pressure groups; members of Parliament, cabinet ministers and public servants may take the initiative in suggesting the adoption of policies and programs in the public interest.

Determination of public policy rests with the cabinet but begins generally with the formulation of policy by individual ministers. Working in co-operation with public servants, a minister formu-

lates policy proposals for consideration by his colleagues in the cabinet. The cabinet chooses those policies it wishes to implement, may itself formulate policies, or may select a policy from among the alternatives submitted.

**Rule of law.** Conforming with the principle of the rule of law, all executive acts must be authorized by law, and laws are enacted by Parliament. Executive acts may be carried out under a statute which specifies how a policy is to be implemented, or by means of an order-in-council under a statute which authorizes the Governor-in-Council (i.e., the Governor General acting on advice from cabinet) to undertake specific acts. Much of the activity of the public service is authorized through yearly appropriation acts approving the expenditure of public funds for specific purposes. Apart from the appropriation of funds, Parliament is concerned with discussion and authorization of policy submitted for its approval by the government. Approval of policies is mainly through the enactment of legislation. The rules of procedure are included in the standing orders of the House of Commons.

A significant feature of the parliamentary process is that cabinet ministers have seats in Parliament and thus share in the exercise of legislative power. The majority of legislation enacted by Parliament is submitted by the government; the constitution provides that all financial measures must originate in the Commons.

The judiciary applies the laws enacted by Parliament. Because Parliament is supreme in the Canadian government, the judiciary must apply the law as Parliament has enacted it, unless a law is declared to be unconstitutional, or not within the legislative jurisdiction of Parliament or of the legislature that enacted it.

**Government administration.** Administration of legislation and of government policies is carried out through a public service comprising employees organized in departments and ministries of government and special boards, commissions, Crown corporations and other agencies. Legislation and tradition have developed a non-partisan public service; employee tenure is unaffected by changes in government. The only direct contact public servants have with Parliament occurs when they are called as witnesses before parliamentary committees; they do not, by convention, express opinions on public policy but usually appear as experts and to explain existing policy. Public servants who head agencies such as the Public Service Commission, the office of the auditor general, the office of the commissioner of official languages, the Library of Parliament or the office of the chief electoral officer are responsible directly to Parliament. They are not subject to direction by the government on matters of policy and may appear before parliamentary committees to explain the policies of their agencies.

Growth in number, variety and complexity of the demands placed on the government requires it not only to adjust its policies but to make changes in the organization of the public service so that required policies can be implemented. Major reorganizations of the public service were authorized by a series of government organization acts in 1966, 1969, 1970, 1976, 1979 and 1982.

## 19.2 The executive

### 19.2.1 The Crown

**The Sovereign.** Since Confederation Canada has had six sovereigns: Victoria, Edward VII, George V, Edward VIII, George VI and Elizabeth II. The present sovereign is not only Queen of Canada but is also head of state of other countries in the Commonwealth as well as being the formal head of the Commonwealth. Her title for Canada was approved by Parliament and established by a royal proclamation on May 28, 1953: Elizabeth the Second, by the grace of God of the United Kingdom, Canada and her other realms and territories, Queen, Head of the Commonwealth, Defender of the Faith.

From time to time the Queen personally discharges the functions of the Crown in Canada, such as the appointment of the Governor General, which Her Majesty does on the recommendation of the prime minister of Canada. During a royal visit, the Queen may participate in ceremonies normally carried out in her name by the Governor General, such as the opening of Parliament or the granting of a general amnesty.

**The Governor General** is the representative of the Crown in Canada. The Right Honourable Jeanne Sauv , the 23rd Governor General since Confederation and Canada's first woman Governor General, was appointed by Queen Elizabeth on December 23, 1983 and took office on May 14, 1984. Constitutionally, the Queen of Canada is the Canadian head of state but the Governor General fulfils her role on her behalf. The letters patent revised and issued under the Great Seal of Canada on October 1, 1947 authorized and empowered the Governor General, on the advice of the Canadian ministers to exercise all powers and authorities lawfully belonging to the Sovereign in respect of Canada.

Following are the Governors General of Canada since Confederation, with dates of assumption of office:

The Viscount Monck of Ballytramm, July 1, 1867  
 The Baron Lisgar of Lisgar and Bailieborough, February 2, 1869  
 The Earl of Dufferin, June 25, 1872  
 The Marquis of Lorne, November 25, 1878  
 The Marquis of Lansdowne, October 23, 1883  
 The Baron Stanley of Preston, June 11, 1888

The Earl of Aberdeen, September 18, 1893  
 The Earl of Minto, November 12, 1898  
 The Earl Grey, December 10, 1904  
 Field Marshal HRH The Duke of Connaught, October 13, 1911  
 The Duke of Devonshire, November 11, 1916  
 General The Baron Byng of Vimy, August 11, 1921  
 The Viscount Willingdon of Ratton, October 2, 1926  
 The Earl of Bessborough, April 4, 1931  
 The Baron Tweedsmuir of Elsfield, November 2, 1935  
 Major General The Earl of Athlone, June 21, 1940  
 Field Marshal The Viscount Alexander of Tunis, April 12, 1946  
 The Right Honourable Vincent Massey, February 28, 1952  
 General The Right Honourable Georges P. Vanier, September 15, 1959  
 The Right Honourable Roland Michener, April 17, 1967  
 The Right Honourable Jules L ger, January 14, 1974  
 The Right Honourable Edward Schreyer, January 21, 1979  
 The Right Honourable Jeanne Sauv , May 14, 1984.

One of the most important responsibilities of the Governor General is to ensure that the country always has a government. If the office of the prime minister becomes vacant because of death or resignation, the Governor General must see that it is filled and that a new government is formed.

As the Queen's representative, the Governor General summons, prorogues and dissolves Parliament on the advice of the prime minister. The Governor General signs orders-in-council, commissions and other state documents, and gives assent to bills that have been passed in both houses of Parliament and which thereby become acts of Parliament with the force of law. In virtually all cases the Governor General is bound by constitutional convention to carry out these duties in accordance with the advice of the responsible ministers. Should the Governor General not wish to accept their advice, and should they maintain that advice, the only alternative is to replace the existing government with a new government but only if the principle of responsible government could be upheld. Thus the Governor General's discretion in choosing another government is strictly limited to a situation in which a person other than the existing prime minister could command the confidence of the House of Commons.

**Canadian honours system.** An exclusively Canadian honours system was introduced in 1967 with the establishment of the Order of Canada. The honours system was enlarged in 1972 with the addition of the Order of Military Merit and three decorations to be awarded in recognition of acts of bravery. A description of these awards and a list of the recipients

from May 1980 to January 1983 are given in Appendix 4.

### 19.2.2 The Privy Council

The Constitution Act, 1867 (Sect. 11) provides for a council to aid and advise in the Government of Canada, called the Queen's Privy Council for Canada. The council that in fact advises the Queen's representative, the Governor General, is the cabinet, an informal committee of the Privy Council composed of ministers, which commands the support of a majority of the House of Commons.

Membership in the Privy Council is for life and includes cabinet ministers of the government of the day, former cabinet ministers, the chief justice of Canada and former chief justices, former speakers of the Senate and the House of Commons of Canada and occasionally other distinguished persons, including members of the royal family, past and present Commonwealth prime ministers and premiers of provinces. As a condition of office, all ministers must first be sworn into the Privy Council. A member is styled "Honourable" and may use the initials PC after his name. The Governor General, the chief justice of Canada and the prime minister of Canada automatically are given the title "Right Honourable" by royal warrant when they take office.

The Privy Council as a whole has met on only a few ceremonial occasions, for example, on March 27, 1981 to receive the Queen's consent to the marriage of the Prince of Wales, as heir to the Canadian Crown, and Lady Diana Spencer. Its constitutional responsibilities to advise the Crown on government matters are discharged exclusively by the cabinet. The legal instruments through which executive authority is exercised are called orders-in-council. A number of ministers, acting as a committee of the Privy Council, make a submission to the Governor General for approval which by convention is given in almost all circumstances; with this approval, the submission becomes an order-in-council.

The office of president of the Privy Council was formerly occupied, more often than not, by the prime minister; in recent years, it has been occupied by another minister who is usually also government leader in the House of Commons, with the broad responsibility of directing house business, including supervision of the government's replies to questions in the house and of parliamentary returns in general, and a special responsibility of ensuring that Parliament, through its operations and organization of business, can effectively function under the increasing pressure of modern government.

A list of members of the Privy Council of Canada is published in Appendix 8, Political update.

### 19.2.3 The prime minister

The prime minister is the leader of the political party requested by the Governor General to form the government, which almost always means the leader

of the party with the strongest representation in the Commons. His position is one of exceptional authority stemming in part from the success of the party at an election. The prime minister chooses his cabinet. When a member of cabinet resigns, the remainder of the cabinet is undisturbed; when the prime minister vacates his office, this act normally carries with it the resignation of the cabinet.

Part of the prime minister's authority lies in his power to recommend to the Governor General dissolution of Parliament. This right, which in most circumstances permits him to precipitate an election, is a source of considerable power both in his dealings with colleagues and with the opposition parties in the house. The prime minister is also responsible for organization of the cabinet and its committees; for the organization and functions of his own office, as well as the Privy Council office and the federal-provincial relations office; and for the allocation of responsibilities between ministers.

Another source of the prime minister's authority derives from the appointments which he recommends to the Governor General, including privy councillors, cabinet ministers, lieutenant-governors of the provinces, provincial administrators, speakers of the Senate, chief justices of all courts, senators and certain senior executives of the public service. The prime minister also recommends the appointment of a new Governor General to the Sovereign, although this normally follows consultation with the cabinet.

Following are the prime ministers since Confederation, with dates of administrations:

Rt. Hon. Sir John Alexander Macdonald, July 1, 1867 — November 5, 1873

Hon. Alexander Mackenzie, November 7, 1873 — October 9, 1878

Rt. Hon. Sir John Alexander Macdonald, October 17, 1878 — June 6, 1891

Hon. Sir John Joseph Caldwell Abbott, June 16, 1891 — November 24, 1892

Rt. Hon. Sir John Sparrow David Thompson, December 5, 1892 — December 12, 1894

Hon. Sir Mackenzie Bowell, December 21, 1894 — April 27, 1896

Rt. Hon. Sir Charles Tupper, May 1, 1896 — July 8, 1896

Rt. Hon. Sir Wilfrid Laurier, July 11, 1896 — October 6, 1911

Rt. Hon. Sir Robert Laird Borden, October 10, 1911 — October 12, 1917 (Conservative Administration)

Rt. Hon. Sir Robert Laird Borden, October 12, 1917 — July 10, 1920 (Unionist Administration)

Rt. Hon. Arthur Meighen, July 10, 1920 — December 29, 1921 (Unionist — National Liberal and Conservative Party)

Rt. Hon. William Lyon Mackenzie King, December 29, 1921 — June 28, 1926

Rt. Hon. Arthur Meighen, June 29, 1926 — September 25, 1926

Rt. Hon. William Lyon Mackenzie King, September 25, 1926 — August 6, 1930

Rt. Hon. Richard Bedford Bennett, August 7, 1930 — October 23, 1935

Rt. Hon. William Lyon Mackenzie King, October 23, 1935 — November 15, 1948

Rt. Hon. Louis Stephen St-Laurent, November 15, 1948 — June 21, 1957

Rt. Hon. John George Diefenbaker, June 21, 1957 — April 22, 1963

Rt. Hon. Lester Bowles Pearson, April 22, 1963 — April 20, 1968

Rt. Hon. Pierre Elliott Trudeau, April 20, 1968 — June 4, 1979

Rt. Hon. Joe Clark, June 4, 1979 — March 3, 1980

Rt. Hon. Pierre Elliott Trudeau, March 3, 1980 — June 30, 1984

Rt. Hon. John Napier Turner, June 30, 1984 — September 17, 1984

Rt. Hon. Martin Brian Mulroney, September 17, 1984 — . . . . .

#### 19.2.4 The cabinet

The cabinet's primary responsibility is to determine priorities among the demands expressed by the people and to define policies to meet those demands. The cabinet consists of all the ministers who are chosen by the prime minister, generally from among members of the House of Commons, although some cabinet ministers are usually chosen from the Senate including the leader of the government in the Senate. Ministers who are members of Parliament usually head government departments because the constitution provides that measures for appropriating public funds or imposing taxes must originate in the Commons. If a senator heads a department, another minister in the Commons has to speak on his behalf on its affairs.

Lists of members of the 22nd, 23rd and 24th ministries are published in Appendix 8, Political update.

Each cabinet minister usually assumes responsibility for one of the departments of government, although a minister may hold more than one portfolio at the same time or he may hold one or more portfolios and one or more acting portfolios. A minister without portfolio may be invited to join the cabinet because the prime minister wishes to have him or her in the cabinet without the heavy duties of running a department, or to provide a suitable balance of regional representation, or for any other reason that the prime minister sees fit. Because of Canada's cultural and geographical diversity, the prime minister gives close attention to geographic representation in the cabinet.

With the enactment of the *Ministries and Ministers of State Act* (Government Organization Act, 1970), five categories of ministers of the Crown may be identified: departmental ministers, ministers with special parliamentary responsibilities, ministers without portfolio, and three types of ministers of state. Ministers of state for designated purposes may head a ministry of state created by proclamation. They are charged with developing new and comprehensive policies in areas of particular urgency and importance and have a mandate determined by the Governor-in-Council. They may have powers, duties and functions and exercise supervision and control of elements of the public service, and may seek parliamentary appropriations to cover the cost of their staff and operations. Other ministers of state may be appointed to assist departmental ministers with their responsibilities. They may have powers, duties and functions delegated to them by the departmental minister, who retains ultimate legal responsibility. Ministers of state of a third group may be appointed under the act to be members of the ministry without being assigned to assist a particular minister. All ministers are appointed on the advice of the prime minister by commissions of office issued by the Governor General under the Great Seal of Canada, to serve and to be accountable to Parliament as members of the government and for any responsibility that might be assigned to them by law or otherwise.

In Canada, almost all executive acts of the government are carried out in the name of the Governor-in-Council. The cabinet, or a committee of ministers acting as a committee of the Privy Council, makes submissions for approval to the Governor General, who is bound by the constitution in nearly all circumstances to accept them. Although some are routine and require little discussion in cabinet, others are of major significance and require extensive deliberation, sometimes covering months of meetings of officials, cabinet committees and the full cabinet.

The cabinet must consider and approve the policy underlying each piece of proposed legislation. After proposed legislation is drafted it must be examined in detail. Between 40 and 60 bills are normally considered by cabinet during a parliamentary session. Proposals for reform of large areas of government organization or administration, and policy to be adopted in fundamental constitutional changes or at a major international conference are among the issues which, on occasion, demand this extensive and detailed consideration.

**The cabinet committee system.** The nature and large volume of policy issues to be decided on by cabinet do not lend themselves to discussion by 30 or more ministers. Growing demands on the executive have stimulated delegation of some cabinet functions to its committees.

Cabinet committees provide a forum for thorough study of policy and expenditure proposals, although the cabinet remains the prime focus of decision-making. Membership of cabinet committees is public but the same rules of secrecy that apply to cabinet deliberations apply to cabinet committees. The prime minister determines the establishment of cabinet committees, their membership and terms of reference. Ministers may invite one or two officials as advisers during cabinet committee meetings. The secretariats of the committees are provided by the Privy Council office and the secretary of a cabinet committee is usually also an assistant secretary to the cabinet. Treasury Board, which is a cabinet committee and a committee of the Privy Council established by statute is an exception; it has its own secretariat headed by a secretary who has the status of a deputy minister.

Under the direction of the prime minister, the secretary to the cabinet prepares agenda and refers memoranda to cabinet to the appropriate committee for study and report to the full cabinet. Except where the prime minister instructs otherwise, all memoranda to cabinet are submitted over the signature of the minister concerned.

The terms of reference of cabinet committees cover virtually the total area of government responsibility. All memoranda to cabinet are first considered by a cabinet committee, except when they are of exceptional urgency or when the prime minister directs otherwise, in which case an item may be considered immediately by the cabinet committee on priorities and planning or the full cabinet.

On the initiative of a minister a policy proposal is prepared, the implementation of which will require new legislation or the amendment of existing legislation. The proposal is addressed formally to cabinet, but is considered first by the relevant policy committee. If approved, the proposal goes forward as a recommendation for confirmation or consideration by cabinet.

If the committee's decision is confirmed, the justice department is instructed to prepare a draft bill expressing in legal terms the intent of the policy proposal. When the draft bill has the minister's approval, he submits it to the cabinet committee on legislation and house planning where it is examined from a legal rather than a policy point of view. Once this committee agrees that the bill is acceptable in all respects, or with modifications, and could be introduced in Parliament, it reports this to cabinet. If cabinet confirmation is given, the prime minister initials the bill and it is then introduced either in the Senate or the House of Commons, depending on constitutional and political considerations.

The order and manner in which a bill is considered in Parliament is the responsibility of the president of the Privy Council and government house leader who negotiates these matters with his counterparts in the

opposition parties. If a bill is to be introduced in the Senate, the president of the Privy Council will discuss questions such as timing and tactics with the leader of the government in the Senate, who in turn will negotiate consideration of the bill with the opposition leader in the Senate.

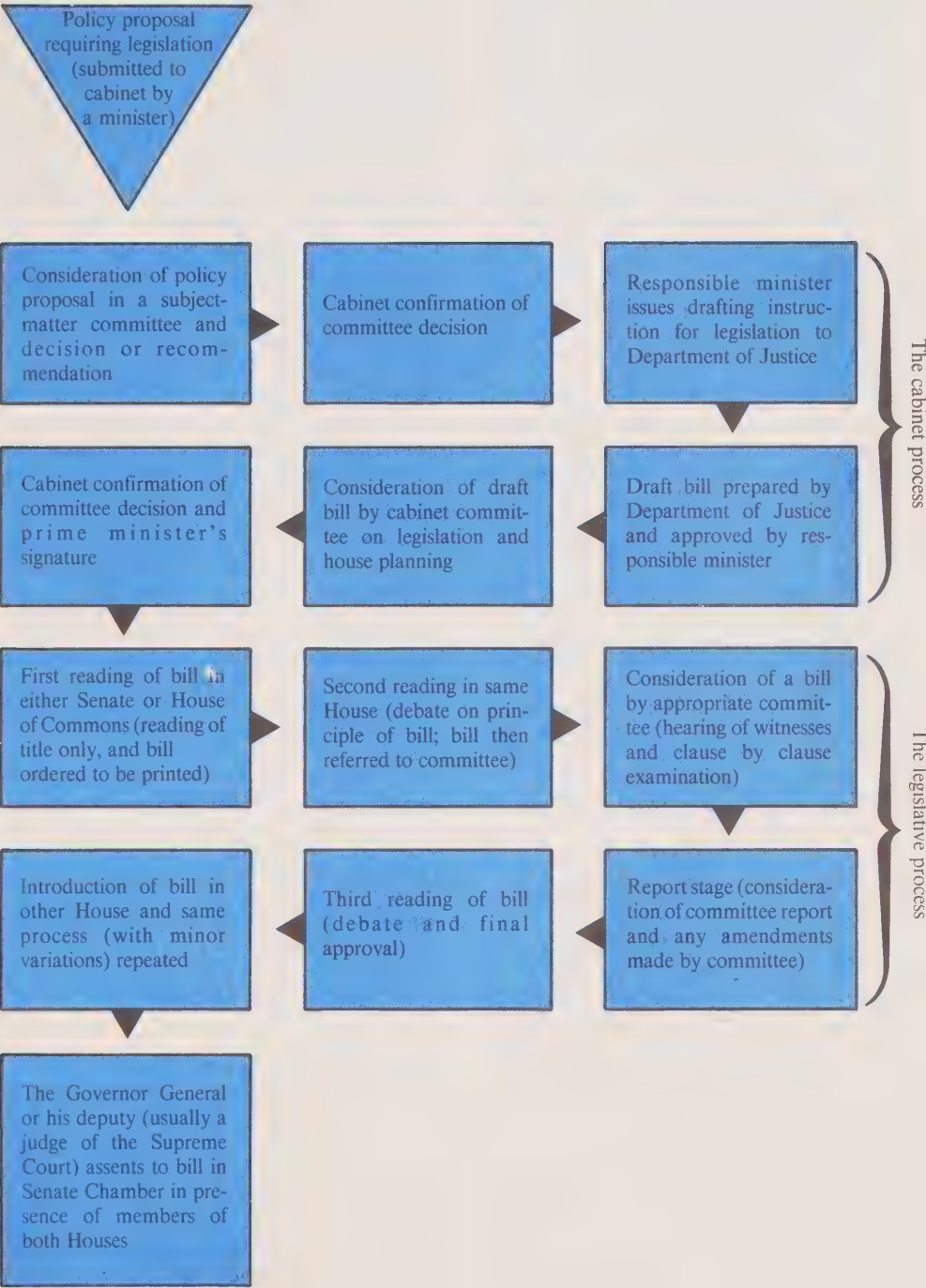
**The Privy Council office** is a secretariat providing staff support to the special committee of the Privy Council, to the cabinet and to the prime minister. For the purposes of the Financial Administration Act it is considered a government department. Since the prime minister is, in effect, chairman of the cabinet, he is the minister responsible for the Privy Council office. The work of the Privy Council office is directed by a public servant known as the clerk of the Privy Council and secretary to the cabinet. He is the senior member of the public service of Canada.

**Parliamentary secretaries.** The Parliamentary Secretaries Act of June 1959 provided for the appointment of 16 parliamentary secretaries from among the members of the Commons to assist ministers. That act was amended by the Government Organization Act, 1970, which allows the number of parliamentary secretaries to equal the number of ministers who hold offices listed in Section 4 of the Salaries Act, that is, ministers with departmental responsibilities, the prime minister, the leader of the government in the Senate and the president of the Privy Council. A parliamentary secretary works under direction of a minister, but has no legal authority in association with the department, and is not given acting responsibility or any of the powers, duties and functions of a minister in that minister's absence or incapacity. Parliamentary secretaries are appointed by the prime minister.

### 19.3 The legislature

The federal legislative authority is vested in the Parliament of Canada — the Queen, the Senate and the House of Commons. Bills may originate in either the Senate or the House of Commons, subject to Section 53 of the Constitution Act, 1867, which provides that bills for the appropriation of any part of the public revenue or the imposition of any tax or impost shall originate in the House of Commons. Bills must pass both houses and receive royal assent before becoming law. In practice, most public bills originate in the House of Commons although, at the request of the government, more have recently been introduced in the Senate in order that they may be dealt with there while the Commons is engaged in other matters such as the debate on the speech from the throne. Private bills may originate in either the House of Commons or the Senate. The Senate may delay, amend or even refuse to pass bills sent to it from the Commons, but differences are usually settled without serious conflict.

Chart 19.1  
The legislative process



**The law making process.** If a bill is introduced and approved in the House of Commons, it is then introduced in the Senate and follows a similar procedure. If a bill is first introduced in the Senate, the reverse procedure is followed. There are three types of bills: public bills introduced by the government; public bills introduced by private members of Parliament; and private bills introduced by private members of Parliament. All bills must pass through various stages before they become law. These stages provide Parliament with opportunities to examine and consider all bills both in principle and in detail. Each type is treated in a slightly different manner, and there are even differences in procedure when the house deals with government bills introduced pursuant to supply and ways and means motions on the one hand, and other government bills on the other. The following outline describes the procedure for a government bill introduced in the House of Commons.

The sponsoring minister gives notice that he intends to introduce a bill on a given subject. Not less than 48 hours later he moves for leave to introduce the bill and that the bill be given first reading. This is normally granted automatically because this first step does not imply approval of any sort. It is only after first reading that the bill is ordered printed for distribution to the members.

At a later sitting the minister moves that the bill be given second reading and that it be referred to an appropriate committee of the House of Commons. A favourable vote on the motion for second reading represents approval of the bill in principle so there is often an extensive debate, which, according to the procedures of the Commons, must be confined to the principle of the bill. The debate culminates in a vote which, if favourable, results in the bill being referred to the appropriate committee of the house, where it is given clause-by-clause consideration.

At the committee stage, expert witnesses and interested parties may be invited to give testimony pertaining to the bill, and the proceedings may cover many weeks.

The house committee prepares and submits a report to the House of Commons which must decide whether to accept the report, including any amendments the committee has made to the bill. At the report stage any member may, on giving 24 hours notice, move an amendment to the bill. All such amendments are debated and are usually put to a vote. Following that, a motion "that the bill be concurred in" or "that the bill, as amended, be concurred in", is put to the vote.

After this report stage, the minister moves that the bill be given third reading and passage. Debate on this motion is limited to whether the bill should be given third reading. Amendments are permitted at this stage but they must be of a general nature, similar to those allowed on second reading. If the vote is

favourable, the bill is introduced in the Senate where it goes through a somewhat similar though not identical process, since each chamber has its own rules of procedure. After the bill has been passed by both houses, it is given royal assent by the Governor General or by his deputy, the Chief Justice, or one of the other judges of the Supreme Court of Canada. The assent ceremony takes place in the Senate chamber in the presence of representatives of both houses of Parliament. The bill comes into force as soon as it is assented to, unless there is a provision in the bill stating that it will come into force on the day on which it is officially proclaimed.

**Duration and sessions of Parliaments.** The length and sessions of the 27th to the 32nd Parliament, covering the period from January 1966 to March 1980, are given in Table 19.1, along with the opening of the 33rd Parliament.

### 19.3.1 The Senate

The Senate is responsible for the protection of the various provincial, minority and sectional interests in Canada. While the composition of the House of Commons is based on the principle of representation by population, Senate membership is based on the principle of equal regional representation.

This feature of the Senate is reflected in its make-up. The Senate has 104 seats distributed on a regional basis: Ontario, 24; Quebec, 24; the Maritime provinces, 24 (10 each from Nova Scotia and New Brunswick and four from Prince Edward Island); Newfoundland, six; the Western provinces, 24 (six each from Manitoba, Saskatchewan, Alberta and British Columbia); and Yukon and Northwest Territories, one each.

Senators are appointed, in the Queen's name, by the Governor General on the advice of the prime minister. To qualify for appointment to the Senate, a person must be at least 30 years of age and own real property to the net value of at least \$4,000 in the province for which he or she is appointed. In Quebec, senators are appointed for each of the original 24 electoral divisions in that province and they must reside, or have their property qualification, in the particular division for which they are appointed. Until 1965, senators were appointed for life; now the retirement age is 75.

The Senate performs three basic functions. In its legislative role, the Senate acts as a court of revision by reviewing Commons bills and frequently amending them. The amendments, often of a technical or clarifying nature, are usually concurred in by the Commons. Constitutionally, the Senate's legislative power is equal to that of the House of Commons. Any bill can be introduced in the Senate except a money bill. Although the Senate can reject any bill, it has rarely exercised this power.

Since 1971, it has been the practice to refer the subject-matter of major government bills to Senate

committees before their formal introduction in the Senate. This has enabled the Senate to conduct thorough studies and, in some instances, to make recommendations for changes while a bill is still before the Commons.

In its deliberative role, the Senate provides a national forum for the discussion of public issues and the airing of regional concerns and grievances from all parts of Canada. On two days notice, a senator can start a debate, with no time limits, on any matter of regional or public concern.

Third is the Senate's investigative function. Inquiries into major social and economic issues by its standing and special committees have produced reports that have often been followed by remedial legislation or changes in government policy.

Representation in the Senate has grown from 72 at Confederation to its present total of 104 members, through the addition of members to represent new provinces and territories. The growth of membership in the Senate is summarized in Table 19.2.

As at September 1984 representation in the Senate by political parties was as follows: Liberals, 73; Conservatives, 22; Independents, three; Independent Liberal, one; vacancies, five.

A list of senators is published in Appendix 8 of this edition.

### 19.3.2 The House of Commons

The number of members in the House of Commons is determined by the readjustment of federal electoral districts based on population counts of the decennial censuses of Canada, conducted by Statistics Canada. The number of representatives elected at each of the 33 general elections since Confederation is given in Table 19.3.

**The federal franchise.** The present federal franchise laws are contained in the Canada Elections Act (RSC 1970, c.14, 1st Supp.) as amended by the Election Expenses Act (SC 1973-74, c.51). Generally, the franchise is conferred upon all Canadian citizens who have reached age 18 and ordinarily live in the electoral district on the date fixed for the beginning of the enumeration at the election. Persons denied the right to vote are: the chief electoral officer and the assistant chief electoral officer; judges appointed by the Governor-in-Council; the returning officer for each electoral district; inmates of any penal institution; persons whose liberty of movement is restricted or who are deprived of the management of their property because of mental disease; and persons disqualified by law for corrupt or illegal practices.

The special voting rules set out in Schedule II to the Canada Elections Act prescribe voting procedures for members of the Canadian forces, for members of the federal public service posted abroad, and also for veterans receiving treatment or domiciliary care in certain institutions.

Electoral districts, voters on list, votes polled and names of members of the House of Commons elected at the 32nd general election, February 18, 1980 are given in Table 19.4 and at the 33rd general election, September 4, 1984, in Table 19.5. Table 19.6 indicates voters on the lists and votes polled at federal general elections in 1972, 1974, 1979, 1980 and 1984.

## 19.4 The judiciary

Parliament is empowered by Section 101 of the Constitution Act, 1867, to provide for the constitution, maintenance and organization of a general court of appeal for Canada and for the establishment of any additional courts for the better administration of Canada's laws. Under this provision Parliament has established the Supreme Court of Canada, the Federal Court of Canada and certain miscellaneous courts. An account of the judiciary and legal system of Canada is presented in Chapter 20.

## 19.5 Federal government administration

For a description of federal financial operations and control, see Chapter 22, Government finance.

### 19.5.1 Government employment

Treasury Board (a statutory committee of cabinet) has overall responsibility for personnel management in the federal public service. It is responsible for development, application and evaluation of personnel policies, systems and methods to ensure that the people needed to carry out programs effectively are obtained at competitive wages and put to efficient use with consideration for the individual and collective rights of employees.

Under provisions of the amended Financial Administration Act and the Public Service Staff Relations Act, both proclaimed in March 1967, Treasury Board is responsible for the development of policies, regulations, standards and programs in the areas of classification and pay, organization and establishments, conditions of employment, collective bargaining and staff relations, official languages, human resources training, development and utilization, pensions, insurance and other employee benefits and allowances, and other personnel management matters affecting the public service. The temporary assignment program is administered by Treasury Board. The board is also responsible for making recommendations on organization development, human resources planning, the determination and evaluation of training needs and education programs, equal employment opportunities program, and standards governing health and safety. It evaluates the results from personnel policies, systems and programs and advises departments and agencies on the design and implementation of systems to improve personnel management.

Responsibility for classification has, with a few exceptions, been delegated to departments, subject to a monitoring process. On a similar basis, delegation of responsibility for the administration of pay is in the process of being delegated to departments. Benefit programs and allowance policies approved by the board are designed to give departments maximum responsibility for administration.

Under the system of collective bargaining established by the Public Service Staff Relations Act, Treasury Board is the employer for employees in the public service, except for separate employers such as the National Research Council and the National Film Board. The board negotiates collective agreements with unions representing 76 bargaining units and advises departments on their administration.

The board develops policy guidelines for public service pension, insurance and related programs, co-ordinates their administration and recommends periodic revisions. It negotiates reciprocal pension transfer agreements with other public and private employers.

**Public Service Commission.** The Public Service Employment Act, which became effective in March 1967, continues the status of the Public Service Commission as an independent agency responsible to Parliament. The commission has the exclusive right and authority to make appointments to and from within the public service. The commission is also empowered to operate staff development and training programs, to assist deputy heads in carrying out training and development and in 1972 was charged to investigate cases of alleged discrimination on grounds of sex, race, national origin, colour or religion in the application and operation of the Public Service Employment Act. Age and marital status were added to these grounds by amendment to the act in 1975.

It may establish boards to decide on appeals against appointments made from within the public service and against release or demotion for incompetence or incapacity; to make recommendations on the revocation of appointments improperly made under delegated authority; and to decide on allegations of political partisanship.

The commission grants or withholds approval of applications for leave of absence from public servants who wish to be candidates in federal, provincial or territorial elections and investigates allegations of improper political activities by public servants.

The act authorizes the commission to delegate to deputy heads any of its powers, except those relating to appeals and inquiries. The commission has delegated powers to make appointments in operational and administrative support categories; however, departments are required to use Canada employment centres as their recruitment agency for appointments from outside the public service. Appointing authority has been delegated in the

administrative and foreign service, technical, and scientific and professional categories under conditions which preserve the commission's authority as central recruiting agency for the public service of Canada with a few exceptions, that is, those cases where a department is virtually the sole employer of a particular occupational specialty. The commission ensures that appointments made under delegated authority comply with the law and commission policies.

The Public Service Commission is guardian of the merit principle, ensuring that high standards are maintained in the service, consistent with adequate representation of the two official language groups, a bilingual capability to the extent prescribed by the government, equal employment and career development opportunities irrespective of sex, race, national origin, colour, age, marital status or religion, and encouragement of opportunities for the disadvantaged.

Any Canadian citizen may apply for a position in the federal public service. Competitive examinations are announced through the news media and posters displayed on public notice boards of Canada employment centres, Public Service Commission of Canada offices, major post offices and other selected locations.

One of the paramount responsibilities of the Public Service Commission relates to staffing in accordance with the merit principle. In recognition of affinity of work and for administrative reasons, public service positions have been aggregated in six broad occupational categories: executive, scientific and professional, technical, administrative and foreign service, administrative support, and operational. The classification system divides these categories into a host of occupational groups, in which positions are similar in skills required and the work performed.

Appointments to public service positions are normally made from within the service, except when it may be in the best interests of the service to do otherwise. In an internal selection process, prospective candidates may be identified through an employee inventory, or may respond to a notice posted to advertise the position. The successful candidate is chosen by a selection board which examines all the candidates. Unsuccessful candidates may appeal the results of the competition. The Public Service Commission maintains an employee inventory for positions at senior management and senior executive levels.

Under other circumstances it may be decided to transfer employees between positions. In exceptional instances an employee may be promoted without competition; other public servants have the right to appeal such a staffing action. A right to appeal also exists when a decision has been taken to recommend an employee's demotion or release because of incompetence or incapacity.

In order that departments may serve the public in accordance with the Official Languages Act, the commission ensures that employees appointed are qualified to meet the linguistic requirements of positions and, in situations where they do not qualify, that incumbents or winners of competitions for bilingual positions receive training in their second official language. Part-time language training is also available to other public servants.

**Native peoples.** The federal Indian affairs and northern development department is responsible for meeting statutory obligations to Indians registered under the Indian Act and for programs approved specifically for them.

Canada's 22,300 Inuit, most of whom live in Northwest Territories, Quebec and Labrador, are the concern of the federal Indian affairs and northern development department, the government of Northwest Territories and provincial governments.

See Appendix 10, the Constitution Act, 1982, for additional information.

### 19.5.2 Departments, boards, commissions and corporations

In Canada the work of government is conducted by federal departments, special boards, commissions and corporations owned or controlled by the Government of Canada, as well as several corporations in which the government holds a minority interest. Of the corporations owned by the Government of Canada, the Crown corporation mode of organization is the most common. Certain activities of a province may also be carried on through Crown corporations. The government has resorted to Crown corporations with increasing frequency to administer and manage public services, many of which require the combination of business enterprise and public accountability. The historical evolution of Crown corporations is described in the government's proposals on the control, direction and accountability of Crown corporations published in August 1977. Chapter I of that paper describes the historical and constitutional background of the Crown corporation form. Part VIII of the Financial Administration Act (RSC 1970, c.F-10) provides a uniform system of financial and budgetary control and of accounting, auditing and reporting for the majority of Crown corporations. In addition, that legislation defines a Crown corporation as a "corporation that is ultimately accountable, through a minister, to Parliament for the conduct of its affairs" and establishes three classes of Crown corporation: departmental, agency and proprietary.

**Departmental corporations.** A departmental corporation is defined as a corporation that is a servant or agent of Her Majesty in right of Canada and is responsible for administrative, supervisory or regulatory services of a governmental nature.

**Agency corporations.** An agency corporation is defined as a corporation that is an agent of Her Majesty in right of Canada and is responsible for the management of trading or service operations on a quasi-commercial basis or for the management of procurement, construction or disposal activities on behalf of Her Majesty in right of Canada.

**Proprietary corporations.** A proprietary corporation is defined as a corporation that is responsible for the management of lending or financial operations, or for the management of commercial or industrial operations involving the production of or dealing in goods and the supplying of services to the public, and is ordinarily required to conduct its operations without parliamentary appropriations.

Departmental corporations are governed by the provisions of the Financial Administration Act that apply to departments generally. Agency and proprietary corporations are subject to the provisions of Part VIII of the act; if there is any inconsistency between its provisions and those of any other act applicable to a corporation, the latter prevail. The same part provides for the regulation and process of approval of corporate budgets and the control of bank accounts, turning over surplus money to the receiver general, providing loans for limited working-capital purposes, awarding contracts and establishing reserves, keeping and auditing accounts, and preparing financial statements and reports for submission to Parliament through the appropriate minister.

A further form of control is exercised by Parliament through the power to vote financial assistance to a corporation, which may secure financing through parliamentary grants, loans or advances, by the issue of capital stock to the government, or by borrowings from the capital markets, often with a government guarantee.

**Unclassified corporations.** Several government-owned corporations are not listed in schedules to the Financial Administration Act but are governed by their own special act, letters patent or articles of incorporation: such as the Bank of Canada, the Canada Council, the Canadian National Railways Securities Trust, the Canadian Wheat Board, and the National Arts Centre Corp. The only provision of the Financial Administration Act to which they are subject is that governing the appointment of auditors, although the Governor-in-Council has the power in some instances to add an unclassified corporation to one of the schedules to the Financial Administration Act.

**Other corporations.** The federal government has established or assisted in the establishment of a number of corporations in which it holds a portion of the capital stock. In most cases, private sector investors hold the remaining shares; in several cases shares are held by provincial or other governments.

These corporations, known as mixed or joint enterprises have been established either by a special act of Parliament, for example, the Canada Development Corp. or Telesat Canada, or by letters patent or articles of incorporation, for example, Panarctic Oils Ltd. Such corporations are not listed in the schedules of the Financial Administration Act and are not subject to its general provisions.

**Appendix 1** of this edition provides concise descriptions of departments, Crown corporations, boards, commissions, offices and agencies of the federal government as of April 1984.

### 19.5.3 Applied titles

The use of applied titles in place of the legal titles of government organizations, for example, Labour Canada, is prescribed by the Federal Identity Program (FIP) which requires the use of such titles in conjunction with symbols to ensure a consistent visual identity throughout the Government of Canada. An example of an applied title is Metric Commission Canada in place of the legal title, Preparatory Commission for Conversion to the Metric System. The titles are used on all applications of the program, for example, signs, vehicles, stationery and advertising but are not to be used on legal applications, such as contracts or documents used in court proceedings.

Treasury Board has central responsibility for the program and the policy, which is issued as part of the administrative policy manual. Each organization is responsible for implementing the policy.

## 19.6 Provincial and territorial governments

The former BNA Act provided for the federal union of three British North American provinces — Canada (Ontario and Quebec), Nova Scotia and New Brunswick — into one dominion under the name Canada. The act made provision for possible future entry into Confederation of the colonies or provinces of Newfoundland, Prince Edward Island and British Columbia, and of Rupert's Land and the North-Western Territory, a vast expanse then held by the Hudson's Bay Company. In 1870, the company surrendered its territories to the British Crown which transferred them to Canada. In exchange it received a cash payment from the Canadian government of £300,000, one-twentieth of the lands in the southern part, "the fertile belt", of the territory, and designated blocks of land around its trading posts. From this new territory was carved Manitoba in 1870, much smaller at its inception than now, and later, in 1905, Saskatchewan and Alberta. British Columbia entered Confederation in 1871 on condition that a railway linking it with Eastern Canada be commenced within two years. In 1873 Prince Edward Island entered the union and in 1949 Newfoundland joined.

### 19.6.1 Provincial governments

In each of the provinces, the Queen is represented by a lieutenant-governor appointed by the Governor General-in-Council. The lieutenant-governor acts on the advice and with the assistance of his ministry or an executive council which is responsible to the legislature and resigns office under circumstances similar to those described concerning the federal government.

The legislature of each province is unicameral, consisting of the lieutenant-governor and a legislative assembly. The assembly is elected by the people for a statutory term of five years but may be dissolved within that period by the lieutenant-governor on the advice of the premier of the province.

Sections 92, 93 and 95 of the Constitution Act, 1867 (Br. Stat. 1867, c.3 and amendments) assign legislative authority in certain areas to the provincial governments.

Details regarding qualifications and disqualifications of the franchise are contained in the elections act of each province. In general, every person at a specified age who is a Canadian citizen or (in certain provinces) other British subject, who complies with certain residence requirements in the province and the electoral district of polling and who falls under no statutory disqualifications, is entitled to vote. Persons can vote in Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Ontario, Manitoba, Saskatchewan and Alberta at age 18 and in British Columbia at 19.

Executive councils of the provinces and the commissioner and legislative assembly of Yukon and Northwest Territories are given in Appendix 8.

**Newfoundland.** The government of Newfoundland has a lieutenant-governor, an executive council and a house of assembly made up of 52 members. On July 10, 1981, the Honourable W. Anthony Paddon became the lieutenant-governor. The 39th legislature in the history of Newfoundland and the eleventh since Confederation, elected April 6, 1982, comprised 45 Progressive Conservatives and seven Liberals. In March 1984 party standings had changed to 44 Progressive Conservatives and eight Liberals.

**Prince Edward Island.** The government of Prince Edward Island consists of a lieutenant-governor, an executive council and a legislative assembly. The Honourable J.A. Doiron was sworn in as lieutenant-governor on January 14, 1980. The legislative assembly has 32 members from 16 electoral districts. Each district elects two representatives. The 56th general assembly elected September 27, 1982 consisted of 21 Progressive Conservatives and 11 Liberals; as at April 1, 1984 party standings had not changed.

**Nova Scotia.** The government of Nova Scotia consists of a lieutenant-governor, acting with the advice of the executive council of the province and

the legislature, known as the house of assembly, which has 52 members. The Honourable Alan R. Abraham, C.D., was lieutenant-governor as of January 31, 1984. A general election took place on October 6, 1981, when 37 Progressive Conservatives, 13 Liberals, one New Democrat and one Independent were elected.

**New Brunswick.** The government of New Brunswick has a lieutenant-governor, an executive council and a legislative assembly. The Honourable George F.G. Stanley was sworn in January 27, 1982, as lieutenant-governor. The legislature elected October 12, 1982, the 50th in New Brunswick's history and 29th since Confederation, had 58 members, including 39 Progressive Conservatives, 18 Liberals and one New Democrat.

**Quebec.** In Quebec, legislative and executive powers are vested in the National Assembly and an executive council. As the representative of the Crown, the lieutenant-governor plays a role in the functioning of both branches. The Honourable Gilles Lamontagne assumed that office on March 28, 1984. The election for the 32nd legislature was held April 13, 1981. Party standings were: 71 Parti Québécois, 46 Liberals, two Independents and three vacancies.

**Ontario.** The government of Ontario consists of a lieutenant-governor, an executive council and a legislative assembly. The Honourable John Black Aird took office as lieutenant-governor in September 1980. A legislative assembly composed of 125 members was elected March 19, 1981. As of January 1, 1984 there were 70 Progressive Conservatives, 33 Liberals and 22 New Democrats.

In addition to the regular ministries are the following provincial agencies: the Niagara Parks Commission, the Ontario Municipal Board, Ontario Hydro, the St. Lawrence Development Commission, the Ontario Northland Transportation Commission, the Liquor Control Board and the Liquor Licence Board.

**Manitoba.** In addition to a lieutenant-governor, Manitoba has an executive council composed of 20 members and a legislative assembly of 57 members. The Honourable Pearl McGonigal became lieutenant-governor on October 23, 1981. In the general election of November 17, 1981, 34 New Democrats and 23 Progressive Conservatives were elected to the 32nd legislature. The standing in 1984 of the legislature: 32 New Democrats, 23 Progressive Conservatives and two Independents.

**Saskatchewan.** The government of Saskatchewan consists of a lieutenant-governor, an executive council and a legislative assembly. The Honourable Frederick W. Johnson, Q.C., is the lieutenant-governor. The statutory number of members of the legislative assembly is 61. In 1984 Saskatchewan had 44 New Democrats, 15 Progressive Conservatives and two Unionists in the legislative assembly.

**Alberta.** In addition to the lieutenant-governor (since October 1979 the Honourable Frank Lynch-Staunton) the government of Alberta is composed of an executive council and a legislative assembly of 79 members. On November 2, 1982, 75 Progressive Conservatives, two members of the New Democratic Party and two Independents were elected to form the 20th legislature.

**British Columbia.** The government of British Columbia consists of a lieutenant-governor, an executive council and a legislative assembly of 57 members. On July 13, 1983 the Honourable Robert Gordon Rogers took office as lieutenant-governor. As at May 1983 the assembly consisted of 35 Social Credit members and 22 New Democrats.

### 19.6.2 Territorial governments

**Yukon.** The constitution for the government of Yukon is based on two federal statutes: the Yukon Act (RSC 1970, c.Y-2) and the Government Organization Act (SC 1966, c.25). The Yukon Act provides for a commissioner as head of government and for a legislative body called the Yukon legislative assembly. Under the Government Organization Act, the minister of Indian affairs and northern development is responsible (with the Governor-in-Council) for directing the commissioner in the administration of Yukon.

In 1979 the minister of Indian affairs and northern development brought in changes which altered the executive level of the Yukon government. It now consists of five elected members of the Yukon legislative assembly who are appointed to an executive council or cabinet by the commissioner, upon the recommendation of the government leader. The commissioner is still the senior representative of the Indian affairs and northern development department in Yukon and performs duties similar to those of a lieutenant-governor in relation to the legislature. The executive council members are assigned portfolio responsibilities by the government leader.

The Yukon Act delineates the jurisdiction of the legislative assembly. It is like those of the provincial assemblies and has jurisdictional control of all matters of a local nature except that the federal government, through the Indian affairs and northern development department, retains control of Yukon's renewable and non-renewable natural resources. Jurisdiction for the territory's wildlife rests with the Yukon government. The legislature is called into session by the commissioner on the advice of the majority party leader.

Legislative authority for Yukon is vested in the Commissioner-in-Council. All bills must be approved by council and assented to by the commissioner before becoming law. As in other jurisdictions, the Governor-in-Council may disallow any ordinance within one year. Ordinances are printed on a sessional basis and consolidated annually.

Amendments to the Yukon Act passed by Parliament allowed for an expansion of council membership from 12 to 16 in 1978 and provided for future expansion to 20.

Yukon legislative assembly members are elected for four-year terms. The assembly usually meets twice a year in Whitehorse.

**Northwest Territories.** The Northwest Territories Act (RSC 1970, c.N-22) provides for an executive, legislative and judicial structure. The commissioner is the chief executive officer, appointed by the federal government and responsible for the administration of Northwest Territories under the direction of the minister of Indian affairs and northern development. The commissioner spends funds voted by the legislative assembly and all new revenue measures are subject to assembly approval. Normally the commissioner obtains federal approval of proposed legislation and budgetary measures before submitting them to council.

The legislative assembly of Northwest Territories consists of 24 members elected for four years. It is required to meet at least twice a year, and in practice generally meets three times a year, usually for four weeks at a winter session and for shorter spring and fall sessions.

The Northwest Territories Act gives the territorial legislative assembly authority to legislate in most areas of government activity except for natural resources other than game; these are reserved to the federal government. Legislation must receive three readings and have the assent of the commissioner. The federal government may disallow any ordinance within one year. The commissioner proposes most legislation but private members' bills are allowed, except for money matters, which are the prerogative of the commissioner. Besides draft legislation, the legislative assembly gives considerable time to policy papers in which the commissioner or other executive committee members seek advice or authority to take a particular course of action.

Parliament approved legislation in March 1979 for the political development of Northwest Territories. Amendments to the Northwest Territories Act allowed the NWT council to set its own number of members, as long as there is a minimum of 15 and no more than 25 members. Previously Parliament had authority to set the number of members, 15 since 1974. The legislative assembly has since set the number at 24; an election for the enlarged number was held in November 1983. The legislative assembly selects its speaker from among its members; previously the commissioner was the presiding officer. The assembly also nominates up to eight of its members to the executive committee along with the commissioner, who is chairman. This committee advises the commissioner on broad policy matters and acts as a consultative body for him. Each elected

executive committee member is responsible for one or more departments of the territorial government.

The federal justice minister is the attorney general of Northwest Territories under the Criminal Code of Canada, with responsibility for criminal but not for civil matters or the constitution or organization of the courts. Law enforcement is provided by the Royal Canadian Mounted Police.

## 19.7 Local government

Local government in Canada comprises all government entities created by the provinces and territories to provide services that can be more effectively discharged through local control. Broadly speaking, local government services are identified in terms of their main functions: protection, transportation, environmental health, environmental development, health and welfare services, recreation, community services and education. Local government may also operate such facilities as public transit and the supply of electricity and gas. Education is normally administered separately from the other local functions.

Under the Constitution Act, 1867 local government was made a responsibility of the provincial legislatures, a responsibility extended to the territories when their governments were constituted in their present forms. The unit of local government, apart from the school board, is usually the municipality which is incorporated as a city, town, village, township or other designation. The powers and responsibilities of municipalities are delegated to them by statutes passed by their respective provincial or territorial legislatures.

An increasing number of special agencies or joint boards and commissions have been created to provide certain services for groups of municipalities. Local government revenue has been supplemented by provincial grants, either unconditional or for specific purposes. Certain functions traditionally assigned to local government have been assumed in whole or in part by the provinces. Besides encouraging the amalgamation of small units, the provinces have established new levels of local government to provide services which can be better discharged at a regional level. Second-tier local governments now cover the whole of British Columbia and much of Ontario. In Quebec three regional governments have been established.

The major revenue source available to local government is the taxation of real property, supplemented by taxation of personal property, businesses and amusements. Revenue is also derived from licences, permits, rents, concessions, franchises, fines and surplus funds from municipal enterprises.

**Newfoundland** has 320 incorporated municipalities comprised of two cities, one metropolitan area, 167

towns and 140 communities. In addition, there are 56 quasi-municipal areas known as local service districts. Cities, towns and communities have elected councils. The metropolitan area has appointed trustees. The local service districts have elected committees.

St. John's, the capital of Newfoundland, was one of the earliest sites of New World settlement. The St. John's metropolitan area covers the area adjoining and surrounding the city of St. John's and the town of Mount Pearl and is similar in organization to a local improvement district.

**Prince Edward Island** has one city, eight towns and 30 villages, all of which are incorporated. Thirty-nine community improvement committees provide a measure of local services to the unincorporated areas of the province. Charlottetown, the capital, was first incorporated in 1855. Five regional administrative units provide elementary and secondary education for the province, with the individual boards elected by residents of the units.

**Nova Scotia** is divided into 18 counties; 12 constitute separate municipalities and the remaining six are each divided into two municipalities, making a total of 24 rural municipalities. Within these municipalities are 25 incorporated villages that provide limited services. Three cities and 39 towns, although located within counties or districts, are entirely independent of them except as to joint expenditures. There is no part of the province that is not municipally organized.

Halifax, capital of Nova Scotia, and part of the largest metropolitan area in the Atlantic provinces, is governed by an elected council consisting of a mayor and 12 aldermen, one for each of 12 wards.

**New Brunswick** municipal organization includes six cities, 23 towns and 85 villages. The remainder of the province is not municipally organized and is administered by the provincial government. There are 239 unincorporated local service districts which are not municipal organizations but were established to provide services of a municipal nature.

Fredericton is the capital of New Brunswick and the third largest city. Saint John is the largest city and Moncton is second.

**Quebec.** The more densely settled areas comprising about one-third of the province are municipally organized; the remainder is governed by the province which administers the James Bay and Northern Quebec Agreement.

Since 1981, Quebec has been reorganizing cities, towns and municipalities into regional county municipalities. The primary responsibility of a regional county municipality is to develop a planning scheme, that is, to define planning objectives and determine land use for its entire territory. It may also be responsible for real estate assessment or for operating a waste management system, to name two

examples. By January 1982, approximately 40 regional county municipalities had been created.

In 1981, there were 267 cities and towns, 1,249 municipalities and 20 native villages. Major municipal consolidations began in 1965 with the fusion of the 14 municipalities on Île Jésus into the new city of Laval. In 1970, the Montréal and Québec Urban Communities and the Outaouais Regional Community were established with integration of municipal services to be staged gradually.

Québec is the capital city and Montréal is the incorporated city with the largest population.

**Ontario.** In Ontario, slightly more than 10% of the area includes 95% of the total population and is municipally organized; the remainder is under direct provincial administration. The settled section is divided into one metropolitan municipality, 12 regional municipalities, 27 counties and regional districts. There are 49 cities including the five boroughs of Metropolitan Toronto, 145 towns, 119 villages, 479 townships and 17 improvement districts. The Municipality of Metropolitan Toronto, in existence since January 1954, encompasses one city and five boroughs and is responsible for assessments, police, water supply, sewerage, metropolitan road systems and planning. The regional municipalities of Durham, Haldimand-Norfolk, Halton, Hamilton-Wentworth, Niagara, Ottawa-Carleton, Peel, Sudbury, Waterloo and York have replaced county administrations and assumed certain responsibilities over all municipalities within their boundaries. The District Municipality of Muskoka has responsibilities, similar to those of the regional municipalities, over the reorganized municipalities of the former district of Muskoka. This form of regional government is contemplated in other areas. Each county, although an incorporated municipality, comprises the towns (with the exception of five separated towns), villages and townships within it. Some municipalities are located outside the counties in areas called districts. These districts in Western and Northern Ontario are not municipal entities.

Toronto, the capital of Ontario, had been the capital of Upper Canada before Confederation. Hamilton is the second largest incorporated city in Ontario, followed in population size by Ottawa, the national capital.

**Manitoba** has five cities, 35 towns, 40 villages and 105 rural municipalities. There are also 17 local government districts which perform the same general functions as municipalities. They are administered by administrators who act, in most districts, on the advice of elected councils, but are subject to the final authority of the minister of municipal affairs.

In Manitoba, the capital city of Winnipeg and 11 surrounding municipalities, after 12 years under the partial central authority of the Metropolitan

Corporation of Greater Winnipeg, were amalgamated into a single city in January 1972.

**Saskatchewan** has 12 cities, 142 towns, 352 villages (including 10 northern villages), 13 northern hamlets and 299 rural municipalities. Administration of the 10 settlements in the northern part of the province is provided by the province with the advice of local advisory committees.

Regina, the capital, is the largest city in Saskatchewan, and Saskatoon is second.

**Alberta** has 11 cities, 111 towns, 162 villages, 18 municipal districts and 30 counties. The counties administer schools in addition to municipal services. There are 19 improvement districts and one special area administered by the Special Areas Board.

Edmonton, the capital, was incorporated in 1904. Calgary was founded in 1875 by the mounted police and incorporated as a city in 1893.

**British Columbia.** In 1967, the government of British Columbia instituted regional government. By January 1972, 28 regional districts had been established. These regional districts are assuming

responsibility for certain services from municipalities within their boundaries as well as providing services to previously unorganized areas. There are 35 cities, 13 towns, 48 villages and 46 districts. Districts are mostly rural although some adjacent to the principal cities of Vancouver and Victoria are largely urban in character. Unincorporated local districts have been set up to provide certain municipal services.

Victoria, the capital, on the southeastern tip of Vancouver Island, was incorporated in 1862. The largest city, Vancouver, was incorporated in 1886.

**Yukon.** There are two cities, one town and five local improvement districts. The local improvement districts, although incorporated, are developmental forms of local government. Whitehorse became the capital in April 1953 when the seat of government was moved from Dawson City.

**Northwest Territories** includes one city, five towns, one village, 26 hamlets and 16 settlements. The hamlets, although incorporated, are developmental forms of local government. Yellowknife on the north arm of Great Slave Lake was named the capital in 1967.

#### Sources

- 19.1 - 19.4 Policy and Management Secretariat, Privy Council Office; English Journals Branch, House of Commons; Law Clerk and Parliamentary Counsel of the Senate; Office of the Chief Electoral Officer.
- 19.5.1 Communications Division, Treasury Board; Public Affairs Directorate, Public Service Commission; Communications Division, Department of Indian Affairs and Northern Development.
- 19.5.2 Policy and Management Secretariat, Privy Council Office.
- 19.5.3 Communications Division, Treasury Board.
- 19.6 Provincial and territorial governments.
- 19.7 Public Institutions Division, Statistics Canada; provincial and territorial governments.

#### Selected references

- A consolidation of the Constitution Acts 1867 to 1982.* Department of Justice Canada, Ottawa, consolidated as of April 17, 1982.
- How Canadians govern themselves.* Eugene A. Forsey, Publications Canada, Ottawa, 1982.
- The Charter of Rights and Freedoms - a guide for Canadians.* Publications Canada, Ottawa, 1982.
- The Constitution and you.* Publications Canada, Ottawa, 1982.

TABLES

.. not available  
... not appropriate or not applicable  
— nil or zero  
-- too small to be expressed

e estimate  
p preliminary  
r revised  
certain tables may not add due to rounding

19.1 Duration and sessions of Parliaments, 1965-84

Order of Parliament	Session	Date of opening	Date of prorogation	Days of session	Sitting days of House of Commons	Date of election, writs returnable, dissolution, and length of Parliament <sup>1,2</sup>
27 <sup>th</sup> Parliament	1 <sup>st</sup>	Jan. 18, 1966	May 8, 1967	476 <sup>6</sup>	250	Nov. 8, 1965 <sup>3</sup>
	2 <sup>nd</sup>	May 8, 1967	Apr. 23, 1968	352 <sup>7</sup>	155	Dec. 9, 1965 <sup>4</sup> Apr. 23, 1968 <sup>5</sup> 867 d
28 <sup>th</sup> Parliament	1 <sup>st</sup>	Sept. 12, 1968	Oct. 22, 1969	406 <sup>8</sup>	197	June 25, 1968 <sup>3</sup>
	2 <sup>nd</sup>	Oct. 23, 1969	Oct. 7, 1970	350 <sup>9</sup>	155	July 25, 1968 <sup>4</sup>
	3 <sup>rd</sup>	Oct. 8, 1970	Feb. 16, 1972	497 <sup>10</sup>	244	Sept. 1, 1972 <sup>5</sup>
	4 <sup>th</sup>	Feb. 17, 1972	Sept. 1, 1972	198 <sup>11</sup>	91	1,500 d
29 <sup>th</sup> Parliament	1 <sup>st</sup>	Jan. 4, 1973	Feb. 26, 1974	419 <sup>12</sup>	206	Oct. 30, 1972 <sup>3</sup>
	2 <sup>nd</sup>	Feb. 27, 1974	May 9, 1974	72	50	Nov. 20, 1972 <sup>4</sup> May 9, 1974 <sup>5</sup> 536 d
30 <sup>th</sup> Parliament	1 <sup>st</sup>	Sept. 30, 1974	Oct. 12, 1976	744 <sup>13</sup>	343	July 8, 1974 <sup>3</sup>
	2 <sup>nd</sup>	Oct. 12, 1976	Oct. 17, 1977	371 <sup>14</sup>	175	July 31, 1974 <sup>4</sup>
	3 <sup>rd</sup>	Oct. 18, 1977	Oct. 10, 1978	358 <sup>15</sup>	151	Mar. 26, 1979 <sup>5</sup>
	4 <sup>th</sup>	Oct. 11, 1978	Mar. 26, 1979	167 <sup>16</sup>	98	1,700 d
31 <sup>st</sup> Parliament	1 <sup>st</sup>	Oct. 9, 1979	Dec. 14, 1979	67	49	May 22, 1979 <sup>3</sup>
						June 11, 1979 <sup>4</sup> Dec. 14, 1979 <sup>5</sup> 187 d
32 <sup>nd</sup> Parliament	1 <sup>st</sup>	Apr. 14, 1980	Nov. 30, 1983	591 <sup>17</sup>	304	Feb. 18, 1980 <sup>3</sup>
	2 <sup>nd</sup>	Dec. 7, 1983	June 29, 1984	81	116	Mar. 10, 1980 <sup>4</sup> July 9, 1984 <sup>5</sup> 1,483 d
33 <sup>rd</sup> Parliament	1 <sup>st</sup>	Nov. 5, 1984	...	...	...	Sept. 4, 1984 <sup>3</sup> Sept. 24, 1984 <sup>4</sup>

<sup>1</sup>The ordinary legal limit of duration for each Parliament is five years.  
<sup>2</sup>Duration of Parliament in days. The life of a Parliament is counted from the date of return of election writs to the date of dissolution, both days inclusive (BNA Act, Sect. 50).  
<sup>3</sup>Date of general election.  
<sup>4</sup>Writs returnable.  
<sup>5</sup>Dissolution of Parliament.  
<sup>6</sup>Includes Easter adjournment from Apr. 6, 1966 to Apr. 19, 1966; two summer adjournments from July 14, 1966 to Aug. 29, 1966 and Sept. 9, 1966 to Oct. 5, 1966; Christmas adjournment from Dec. 21, 1966 to Jan. 9, 1967; and Easter adjournment from Mar. 22, 1967 to Apr. 3, 1967.  
<sup>7</sup>Includes summer adjournment from July 7, 1967 to Sept. 25, 1967; Christmas adjournment from Dec. 21, 1967 to Jan. 22, 1968; and Easter (Liberal Convention) Mar. 28, 1968 to Apr. 23, 1968.  
<sup>8</sup>Includes Christmas adjournment from Dec. 20, 1968 to Jan. 14, 1969; Easter adjournment from Apr. 2, 1969 to Apr. 14, 1969; and summer adjournment from July 25, 1969 to Oct. 22, 1969.  
<sup>9</sup>Includes Christmas adjournment from Dec. 19, 1969 to Jan. 12, 1970; Easter adjournment from Mar. 25, 1970 to Apr. 6, 1970; and summer adjournment from June 26, 1970 to Oct. 5, 1970.  
<sup>10</sup>Includes Christmas adjournment from Dec. 18, 1970 to Jan. 11, 1971; Easter adjournment from Apr. 7, 1971 to Apr. 19, 1971; summer adjournment from June 30, 1971 to Sept. 7, 1971; Christmas adjournments from Dec. 23, 1971 to Dec. 28, 1971 and Dec. 31, 1971 to Jan. 12, 1972.  
<sup>11</sup>Includes Easter adjournment from Mar. 29, 1972 to Apr. 13, 1972; and summer adjournment from July 7, 1972 to Aug. 31, 1971.  
<sup>12</sup>Includes Easter adjournment from Apr. 19, 1973 to May 6, 1973; summer adjournments from July 27, 1973 to Aug. 30, 1973 and Sept. 21, 1973 to Oct. 15, 1973; Christmas adjournments from Dec. 22, 1973 to Jan. 2, 1974 and Jan. 14, 1974 to Feb. 26, 1974.  
<sup>13</sup>Includes Christmas adjournment from Dec. 20, 1974 to Jan. 22, 1975; Easter adjournment from Mar. 27, 1975 to Apr. 7, 1975; summer adjournment from July 31, 1975 to Oct. 13, 1975; Christmas adjournment from Dec. 20, 1975 to Jan. 26, 1976; Easter adjournment from Apr. 14, 1976 to Apr. 26, 1976; and summer adjournment from July 16, 1976 to Oct. 12, 1976.  
<sup>14</sup>Includes Christmas adjournment from Dec. 22, 1976 to Jan. 24, 1977; Easter adjournment from Apr. 6, 1977 to Apr. 18, 1977; summer adjournments from July 25, 1977 to Aug. 4, 1977; Aug. 5, 1977 to Aug. 9, 1977 and Aug. 9, 1977 to Oct. 17, 1977.  
<sup>15</sup>Includes Christmas adjournment from Dec. 20, 1977 to Jan. 23, 1978; Easter adjournment from Mar. 22, 1978 to Apr. 3, 1978; and summer adjournment from June 30, 1978 to Oct. 10, 1978.  
<sup>16</sup>Includes Christmas adjournment from Dec. 22, 1978 to Jan. 23, 1979.  
<sup>17</sup>Includes summer adjournment from July 22, 1980 to Oct. 6, 1980; Christmas adjournment from Dec. 19, 1980 to Jan. 12, 1981; Easter adjournment from Apr. 15, 1981 to Apr. 21, 1981 and Apr. 23, 1981 to May 21, 1981; summer adjournment from July 17, 1981 to Oct. 14, 1981; Christmas adjournment from Dec. 18, 1981 to Jan. 25, 1982.

## 19.2 Representation in the Senate since Confederation, 1867

Province or territory	1867	1870	1871	1873	1882	1887	1892	1903	1905	1915-1948	1949-1974	1975-1984
Ontario	24	24	24	24	24	24	24	24	24	24	24	24
Quebec	24	24	24	24	24	24	24	24	24	24	24	24
Atlantic provinces	24	24	24	24	24	24	24	24	24	24	30	30
Nova Scotia	12	12	12	10	10	10	10	10	10	10	10	10
New Brunswick	12	12	12	10	10	10	10	10	10	10	10	10
Prince Edward Island	...	...	...	4	4	4	4	4	4	4	4	4
Newfoundland	...	...	...	...	...	...	...	...	...	...	6	6
Western provinces	...	2	5	5	6	8	9	11	15	24	24	24
Manitoba	...	2	2	2	3	3	4	4	4	6	6	6
British Columbia	...	...	3	3	3	3	3	3	3	6	6	6
Saskatchewan } Alberta }	...	...	...	...	...	2	2	4	{ 4	6	6	6
Territories	...	...	...	...	...	...	...	...	...	...	...	2
Yukon	...	...	...	...	...	...	...	...	...	...	...	1
Northwest Territories	...	...	...	...	...	...	...	...	...	...	...	1
Total	72	74	77	77	78	80	81	83	87	96	102	104

## 19.3 Representation in the House of Commons, as at federal general elections 1867-1984

Province or territory	1867	1872	1874 1878	1882	1887 1891	1896 1900	1904	1908 1911	1917 1921	1925 1930	1935 1940 1945	1949	1953 1957 1958 1962 1963 1965	1968 1972 1974	1979 1980 1984
Ontario	82	88	88	92	92	92	86	86	82	82	82	83	85	88	95
Quebec	65	65	65	65	65	65	65	65	65	65	65	73	75	74	75
Nova Scotia	19	21	21	21	21	20	18	18	16	14	12	13	12	11	11
New Brunswick	15	16	16	16	16	14	13	13	11	11	10	10	10	10	10
Manitoba	...	4	4	5	5	7	10	10	15	17	17	16	14	13	14
British Columbia	...	6	6	6	6	6	7	7	13	14	16	18	22	23	28
Prince Edward Island	...	...	6	6	6	5	4	4	4	4	4	4	4	4	4
Saskatchewan } Alberta }	...	...	...	...	4	4	10	{ 10 7	16 12	21 16	21 17	17	17	19	21
Yukon	...	...	...	...	...	...	1	1	1	1	1	1	1	1	1
Mackenzie River } NWT <sup>1</sup> }	...	...	...	...	...	...	...	...	...	...	...	7	{ 1 7	1	2
Newfoundland	...	...	...	...	...	...	...	...	...	...	...	...	7	7	7
Total	181	200	206	211	215	213	214	221	235	245	245	262	265	264	282

<sup>1</sup>Electoral district of Northwest Territories in 1963, 1965, 1968, 1972, 1974, 1979, 1980 and 1984.

## 19.4 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-second general election, Feb. 18, 1980

Province and electoral district	Population, Census 1976	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
NEWFOUNDLAND (7 members)					
Bonavista - Trinity - Conception	73,990	27,951	14,467	D. Rooney	Lib.
Burin - St. George's	63,332	21,561	14,979	R. Simmons	Lib.
Gander - Twillingate	76,698	27,722	17,465	G. Baker	Lib.
Grand Falls - White Bay - Labrador	81,331	29,684	15,530	W. Rompkey	Lib.
Humber - Port au Port - St. Barbe	81,282	29,677	13,170	B. Tobin	Lib.
St. John's East	91,861	32,795	20,007	J.A. McGrath	PC
St. John's West	89,231	34,702	19,067	J.C. Crosbie	PC

### 19.4 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-second general election, Feb. 18, 1980 (continued)

Province and electoral district	Population, Census 1976	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>PRINCE EDWARD ISLAND</b> (4 members)					
Cardigan	29,249	17,917	8,590	D.J. MacDonald	Lib.
Egmont	30,380	16,582	8,639	G. Henderson	Lib.
Hillsborough	27,800	15,055	7,128	T. McMillan	PC
Malpeque	30,800	17,004	8,486	M. Gass	PC
<b>NOVA SCOTIA</b> (11 members)					
Annapolis Valley - Hants	80,360	41,022	17,152	J.P. Nowlan	PC
Cape Breton - East Richmond	64,503	31,931	12,478	D. Dingwall	Lib.
Cape Breton Highlands - Canso	64,937	36,446	18,262	A.J. MacEachen	Lib.
Cape Breton - The Sydneys	67,137	34,766	15,164	R. MacLellan	Lib.
Central Nova	63,479	32,526	15,576	E.M. MacKay	PC
Cumberland - Colchester	77,685	39,967	18,463	R.C. Coates	PC
Dartmouth - Halifax East	94,275	43,073	17,968	M. Forrestall	PC
Halifax	76,572	40,934	16,949	G. Regan	Lib.
Halifax West	97,968	48,168	19,195	H. Crosby	PC
South Shore	72,305	36,557	16,139	L.R. Crouse	PC
South West Nova	69,350	38,665	19,151	Coline Campbell	Lib.
<b>NEW BRUNSWICK</b> (10 members)					
Carleton - Charlotte	64,226	30,875	14,565	F. McCain	PC
Fundy - Royal	76,864	41,302	16,805	R. Corbett	PC
Gloucester	68,105	35,101	22,229	H. Breau	Lib.
Madawaska - Victoria	55,824	26,369	17,190	E.G. Corbin	Lib.
Moncton	88,512	46,820	22,365	G. McCauley	Lib.
Northumberland - Miramichi	56,095	27,168	14,799	M.A. Dionne	Lib.
Restigouche	53,540	27,246	16,560	M. Harquail	Lib.
Saint John	74,063	31,833	13,122	M. Landers	Lib.
Westmorland - Kent	58,176	32,421	21,625	R. LeBlanc	Lib.
York - Sunbury	81,845	38,409	18,246	J.R. Howie	PC
<b>QUEBEC</b> (75 members)					
Abitibi	94,431	43,796	22,050	R. Gingras	Lib.
Argenteuil	63,655	32,349	21,976	R. Gourd	Lib.
Beauce	74,739	42,808	21,647	N. Lapointe	Lib.
Beauharnois - Salaberry	75,371	38,385	27,476	G. Laniel	Lib.
Bellechasse	80,052	40,632	20,636	A. Garant	Lib.
Berthier - Maskinongé	66,367	40,604	21,232	A. Yanakis	Lib.
Blainville - Deux-Montagnes	92,001	49,265	35,979	F. Fox	Lib.
Bonaventure - Îles-de-la-Madeleine	59,505	27,942	19,193	R. Bujold	Lib.
Chambly	97,513	47,634	32,849	R. Dupont	Lib.
Champlain	74,956	40,319	25,758	M. Veillette	Lib.
Charlesbourg	118,069	60,475	42,569	P. Bussi�eres	Lib.
Charlevoix	73,215	31,561	22,130	C. Lapointe	Lib.
Ch�ateauguay	79,645	37,323	27,152	I. Watson	Lib.
Chicoutimi	81,744	31,374	20,821	M. Dionne	Lib.
Drummond	71,051	36,302	26,082	Y. Pinard	Lib.
Frontenac <sup>2</sup>	68,830	32,372	14,745	L. Corriveau	Lib.
Gasp�	59,958	29,732	17,846	A. Cyr	Lib.
Gatineau	98,058	45,313	35,437	R. Cousineau	Lib.
Hull	86,753	41,206	27,938	G. Isabelle	Lib.
Joliette	83,086	48,295	22,280	R. LaSalle	PC
Jonqu�ere	66,697	30,191	22,202	G. Marceau	Lib.
Kamouraska - Riv�ere-du-Loup	68,939	35,154	19,117	R. Gendron	Lib.
Labelle	83,413	44,878	29,488	M. Dupras	Lib.
Lac-Saint-Jean	56,083	34,105	21,267	P. G�imail	Lib.
Langelier	71,365	34,940	24,714	J.G. Lamontagne	Lib.
Laprairie	102,659	51,702	36,842	P. Deniger	Lib.
L�vis	95,021	53,751	35,519	R. Guay	Lib.
Longueuil	122,429	48,398	32,755	J. Olivier	Lib.
Lotbini�re	76,021	42,204	24,780	J.-G. Dubois	Lib.
Louis-H�bert	102,227	53,379	34,231	D. Dawson	Lib.
Manicouagan	82,161	31,814	21,499	A. Maltais	Lib.
Matap�dia - Matane	57,739	27,365	21,116	P. De Ban�	Lib.
M�gantic - Compton - Stanstead	73,244	37,938	21,562	C. Tessier	Lib.
Missisquoi	70,409	37,947	20,022	A. Bachand	Lib.
Montmorency	78,219	41,001	28,403	L. Duclos	Lib.
Pontiac - Gatineau - Labelle	67,103	30,904	21,605	T. Lefebvre	Lib.
Portneuf	73,957	39,967	29,234	R. Dion	Lib.
Qu�bec-Est	84,509	38,264	27,546	G. Duquet	Lib.
Richelieu	77,855	41,614	27,886	J.-L. Leduc	Lib.
Richmond	63,498	33,387	21,104	A. Tardif	Lib.
Rimouski	74,378	38,637	21,482	Eva C�te	Lib.
Roberval	64,832	34,421	17,724	Suzanne Beauchamp-Niquet	Lib.

### 19.4 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-second general election, Feb. 18, 1980 (continued)

Province and electoral district	Population, Census 1976	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>QUEBEC (concluded)</b>					
Saint-Hyacinthe	78,636	42,707	28,130	M. Ostiguy	Lib.
Saint-Jean	81,655	42,492	30,134	P.-A. Massé	Lib.
Saint-Maurice	68,532	36,090	27,356	J. Chrétien	Lib.
Shefford	86,788	48,045	32,449	J. Lapierre	Lib.
Sherbrooke	80,486	38,371	27,224	Irénée Pelletier	Lib.
Témiscamingue	80,015	36,431	22,031	H. Tousignant	Lib.
Terrebonne	103,213	53,498	36,089	J.R. Comtois	Lib.
Trois-Rivières	71,477	35,502	23,791	C.G. Lajoie	Lib.
Verchères	98,491	55,615	37,393	B.P. Loiselle	Lib.
Island of Montréal and Île-Jésus	101,535	41,545	30,924	C. Rossi	Lib.
Bourassa	105,595	49,992	37,860	L.R. Desmarais	Lib.
Dollard	98,164	48,443	34,560	Y. Demers	Lib.
Duvernay	86,806	40,988	29,232	A. Portelance	Lib.
Gamelin	79,433	29,410	21,138	S. Joyal	Lib.
Hochelaga - Maisonneuve	86,500	42,895	25,502	R. Blaker	Lib.
Lachine	94,818	42,358	32,561	J. Campbell	Lib.
LaSalle	76,488	24,751	16,201	D. Berger	Lib.
Laurier	102,626	51,803	38,580	M. Roy	Lib.
Laval	92,983	44,975	33,317	Jeanne Sauvé <sup>3</sup>	Lib.
Laval-des-Rapides	93,177	39,574	27,428	Céline Hervieux-Payette	Lib.
Mercier	90,372	41,870	33,821	P.-E. Trudeau <sup>4</sup>	Lib.
Mount Royal	89,507	39,168	27,604	W. Allmand	Lib.
Notre-Dame-de-Grâce	87,132	32,604	23,004	M. Lalonde	Lib.
Outremont	80,763	30,485	22,399	A. Ouellet	Lib.
Papineau	82,543	35,532	26,544	C.-A. Lachance	Lib.
Rosemont	88,648	37,079	28,383	M. Prud'homme	Lib.
Saint-Denis	85,202	37,156	24,907	D. Johnston	Lib.
Saint-Henri - Westmount	72,772	25,354	17,757	J. Guilbault	Lib.
Saint-Jacques	121,897	52,662	42,228	Monique Bégin	Lib.
Saint-Léonard - Anjou	77,435	28,742	19,160	J.-C. Malépart	Lib.
Sainte-Marie	86,078	36,561	27,210	Thérèse Killens	Lib.
Saint-Michel	108,866	54,696	39,159	H. Herbert	Lib.
Vaudreuil	84,055	37,160	27,575	R. Savard	Lib.
Verdun					
<b>ONTARIO</b>					
(95 members)					
Algoma	71,145	34,618	17,432	M. Foster	Lib.
Brampton - Georgetown	125,589	62,589	25,243	J. McDermid	PC
Brant	99,099	46,843	19,194	D. Blackburn	NDP
Bruce - Grey	73,771	38,870	18,326	G.M. Gubin	PC
Burlington	104,314	53,769	27,212	W. Kempling	PC
Cambridge	77,427	36,482	14,314	C. Speyer	Lib.
Cochrane	62,195	29,187	15,280	K. Penner	PC
Durham - Northumberland	76,576	39,212	17,587	A. Lawrence	PC
Elgin	69,092	33,954	16,845	J. Wise	PC
Erie	70,161	32,324	12,861	G. Fretz	PC
Essex - Kent	71,366	32,057	16,898	R. Daudlin	Lib.
Essex - Windsor	102,295	48,296	24,651	E.F. Whelan	Lib.
Glengarry - Prescott - Russell	74,796	41,367	28,189	D. Ethier	Lib.
Grey - Simcoe	71,254	35,894	16,488	G. Mitges	PC
Guelph	80,834	44,184	17,268	J. Schroder	Lib.
Haldimand - Norfolk	89,252	44,466	18,600	B. Bradley	PC
Halton	102,053	53,089	24,752	O. Jelinek	PC
Hamilton East	84,205	37,141	15,430	J.C. Munro	Lib.
Hamilton Mountain	96,482	50,077	17,700	I. Deans	NDP
Hamilton - Wentworth	80,608	42,165	18,918	G. Scott	PC
Hamilton West	87,522	40,458	15,500	L.M. Alexander	PC
Hastings - Frontenac	67,804	33,693	14,211	W. Vankoughnet	PC
Huron - Bruce	67,496	34,863	16,520	M. Cardiff	PC
Kenora - Rainy River	75,392	34,872	14,688	J.M. Reid	Lib.
Kent	78,921	35,350	15,140	M. Bossy	Lib.
Kingston and the Islands	89,243	43,542	18,146	Flora MacDonald	PC
Kitchener	106,133	49,876	19,502	P. Lang	Lib.
Lambton - Middlesex	75,269	38,103	17,081	R. Ferguson	Lib.
Lanark - Renfrew - Carleton	72,786	37,631	20,487	P. Dick	PC
Leeds - Grenville	78,604	38,892	19,800	T. Cossitt	PC
Lincoln	90,700	47,999	17,449	B. Mackasey	Lib.
London East	85,391	37,322	17,861	C. Turner	Lib.
London - Middlesex	74,714	36,591	15,682	G.M. Bloomfield	Lib.
London West	106,282	61,576	27,118	J. Buchanan	Lib.
Mississauga North	138,576	68,070	30,000	D. Fisher	PC
Mississauga South	111,441	52,116	21,480	D. Blenkarn	PC
Nepean - Carleton	108,336	58,967	31,498	W. Baker	Lib.
Niagara Falls	81,908	38,809	15,871	A. MacBain	Lib.
Nickel Belt	90,799	41,792	19,805	Judy Erola	Lib.
Nipissing	69,159	32,677	16,394	J.-J. Blais	PC
Northumberland	75,974	37,020	17,860	G. Hees	PC
Ontario	87,803	48,991	19,963	S. Fennell	PC
Oshawa	107,023	52,066	26,761	E. Broadbent <sup>4</sup>	NDP

### 19.4 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-second general election, Feb. 18, 1980 (continued)

Province and electoral district	Population, Census 1976	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>ONTARIO (concluded)</b>					
Ottawa - Carleton	119,748	65,562	34,960	J.-L. Pepin	Lib.
Ottawa Centre	83,371	47,417	21,659	J. Evans	Lib.
Ottawa - Vanier	84,309	41,684	27,364	J.-R. Gauthier	Lib.
Ottawa West	95,479	50,985	22,460	L. Francis	Lib.
Oxford	85,337	42,378	19,382	B. Halliday	PC
Perry Sound - Muskoka	69,668	34,170	14,333	W. Darling	PC
Perth	66,279	32,026	15,172	S. Jarvis	PC
Peterborough	91,656	48,359	19,417	W. Domm	PC
Prince Edward - Hastings	75,447	36,991	16,893	J. Ellis	PC
Renfrew - Nipissing - Pembroke	82,755	39,813	20,529	L. Hopkins	Lib.
St. Catharines	102,420	49,386	18,622	J. Reid	PC
Sarnia	81,342	40,291	16,275	J. Bud Cullen	Lib.
Sault Ste Marie	63,615	32,332	15,449	R. Irwin	Lib.
Simcoe North	80,718	40,932	14,874	D. Lewis	PC
Simcoe South	92,549	45,540	19,768	R.A. Stewart	PC
Stormont - Dundas	85,366	42,140	22,251	E. Lumley	Lib.
Sudbury	86,950	39,582	21,954	D. Frith	Lib.
Thunder Bay - Atikokan	68,571	33,840	13,234	P. McRae	Lib.
Thunder Bay - Nipigon	68,660	35,727	16,592	J. Masters	Lib.
Timiskaming	58,342	26,903	11,135	B. Lonsdale	Lib.
Timmins - Chapleau	64,004	30,184	15,628	J.R. Chénier	Lib.
Victoria - Haliburton	82,355	42,096	20,308	W. Scott	PC
Waterloo	105,569	51,704	20,609	W. McLean	PC
Welland	80,922	41,536	18,112	G. Parent	Lib.
Wellington - Dufferin - Simcoe	81,988	39,546	21,205	P. Beatty	PC
Windsor - Walkerville	82,331	40,354	20,869	M. MacGuigan	Lib.
Windsor West	82,902	34,031	19,755	H. Gray	Lib.
York North	108,704	60,116	26,039	J. Gamble	PC
York - Peel	99,027	51,036	23,955	S. Stevens	PC
Metropolitan Toronto					
Beaches	80,008	35,723	12,675	N. Young	NDP
Broadview - Greenwood	79,660	32,359	12,953	R. Rae	NDP
Davenport	77,236	23,540	14,545	C. Caccia	Lib.
Don Valley East	109,824	49,363	21,944	D. Smith	Lib.
Don Valley West	88,884	48,954	25,260	J. Bosley	PC
Eglinton - Lawrence	89,957	41,606	20,861	R. de Corneille	Lib.
Etobicoke Centre	103,467	57,465	26,969	M. Wilson	PC
Etobicoke - Lakeshore	88,276	44,090	17,903	K. Robinson	Lib.
Etobicoke North	105,566	50,348	23,243	R. MacLaren	Lib.
Parkdale - High Park	83,321	38,048	17,213	J. Flis	Lib.
Rosedale	81,020	38,613	16,862	D. Crombie	PC
St. Paul's	81,109	39,758	17,905	J. Roberts	Lib.
Scarborough Centre	89,037	41,347	16,595	N. Kelly	Lib.
Scarborough East	93,641	43,738	17,658	G. Gilchrist	PC
Scarborough West	87,298	40,974	14,316	D. Weatherhead	Lib.
Spadina	78,052	28,650	13,280	P. Stollery	Lib.
Trinity	82,294	22,141	12,628	Aideen Nicholson	Lib.
Willowdale	88,248	47,186	22,235	J. Peterson	Lib.
York Centre	102,597	38,229	23,116	R. Kaplan	Lib.
York East	101,337	46,094	20,580	D. Collette	Lib.
York - Scarborough	148,286	82,134	39,208	P.J. Cosgrove	Lib.
York South - Weston	88,479	35,275	16,520	Ursula Appolloni	Lib.
York West	96,894	37,945	21,385	J. Fleming	Lib.
<b>MANITOBA (14 members)</b>					
Brandon - Souris	71,816	34,397	16,098	W. Dinsdale	PC
Churchill	66,961	23,933	10,319	R. Murphy	NDP
Dauphin	56,223	29,035	12,960	Laverne Lewycky	NDP
Lisgar	65,673	28,907	18,057	J.B. Murta	PC
Portage - Marquette	63,014	30,686	16,219	C. Mayer	PC
Provencher	67,950	32,758	14,677	J. Epp	Lib.
St. Boniface	85,936	44,458	20,076	R. Bockstael	PC
Selkirk - Interlake	63,056	33,017	15,055	T. Sargeant	NDP
Winnipeg - Assiniboine	92,959	45,194	22,160	D. McKenzie	PC
Winnipeg - Birds Hill	92,403	45,543	24,672	W. Blaikie	NDP
Winnipeg - Fort Garry	80,308	40,476	18,694	L. Axworthy	Lib.
Winnipeg North	81,554	36,867	18,561	D. Orlikow	NDP
Winnipeg North Centre	66,403	22,333	12,637	S. Knowles	NDP
Winnipeg - St. James	67,250	29,678	11,078	C. Keeper	NDP
<b>SASKATCHEWAN (14 members)</b>					
Assiniboia	59,880	31,395	11,251	L. Gustafson	PC
Humboldt - Lake Centre	63,193	31,894	13,243	V. Althouse	NDP
Kindersley - Lloydminster	64,018	30,802	14,220	W. McKnight	PC
Mackenzie	54,836	26,037	10,794	S. Korchinski	PC
Moose Jaw	60,636	30,955	14,330	D. Neil	PC
Prince Albert	69,795	33,424	11,601	S. Hovdebo	NDP

### 19.4 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-second general election, Feb. 18, 1980 (concluded)

Province and electoral district	Population, Census 1976	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>SASKATCHEWAN (concluded)</b>					
Qu'Appelle - Moose Mountain	56,295	27,733	13,676	A. Hamilton	PC
Regina East	77,374	37,130	13,630	S. de Jong	NDP
Regina West	82,631	41,277	17,353	L. Benjamin	NDP
Saskatoon East	72,847	37,723	12,985	R. Ogle	PC
Saskatoon West	78,834	40,822	17,636	R. Hnatyshyn	PC
Swift Current - Maple Creek	54,461	27,023	12,917	F. Hamilton	NDP
The Battlefords - Meadow Lake	60,520	27,548	9,819	D. Anguish	NDP
Yorkton - Melville	66,003	33,476	15,240	L. Nystrom	NDP
<b>ALBERTA</b> (21 members)					
Athabasca	71,679	28,102	13,287	J. Shields	PC
Bow River	80,161	39,867	30,463	G. Taylor	PC
Calgary Centre	79,800	32,536	18,610	H. Andre	PC
Calgary East	105,986	43,786	23,073	J. Kushner	PC
Calgary North	86,186	41,391	26,201	W. Wright	PC
Calgary South	109,255	51,261	34,873	J. Thomson	PC
Calgary West	88,683	40,527	26,639	J. Hawkes	PC
Crowfoot	62,505	30,733	23,491	A.J. Malone	PC
Edmonton East	89,872	27,670	14,840	W. Yurko	PC
Edmonton North	100,370	36,452	21,442	S.E. Paproski	PC
Edmonton South	94,403	40,729	24,839	D. Roche	PC
Edmonton - Strathcona	90,361	40,373	23,920	D. Kilgour	PC
Edmonton West	86,346	33,374	18,730	M. Lambert	PC
Lethbridge - Foothills	91,649	39,927	27,307	B.A. Thacker	PC
Medicine Hat	84,853	36,932	25,908	B. Hargrave	PC
Peace River	80,936	32,015	18,953	A. Cooper	PC
Pembina	107,072	48,773	31,490	F. Elzinga	PC
Red Deer	90,165	42,590	31,758	G. Towers	PC
Vegreville	73,544	34,441	25,682	D. Mazankowski	PC
Wetaskiwin	75,300	35,606	26,620	S. Schellenberger	PC
Yellowhead	88,911	40,309	27,953	J. Clark <sup>4</sup>	PC
<b>BRITISH COLUMBIA</b> (28 members)					
Burnaby	96,607	51,013	21,587	S.J. Robinson	NDP
Capilano	83,192	44,437	26,327	R. Huntington	PC
Cariboo - Chilcotin	75,243	30,405	12,355	L. Greenaway	PC
Comox - Powell River	105,994	51,175	25,007	R. Skelly	NDP
Cowichan - Malahat - The Islands	87,696	46,071	22,154	J. Manly	NDP
Esquimalt - Saanich	100,252	55,548	24,961	D. Munro	PC
Fraser Valley East	90,318	44,342	21,989	A. Patterson	PC
Fraser Valley West	109,230	51,021	25,770	R.L. Wenman	NDP
Kamloops - Shuswap	95,100	45,843	17,896	N.A. Riis	NDP
Kootenay East - Revelstoke	71,796	33,446	13,299	S. Parker	NDP
Kootenay West	61,177	28,518	12,232	L.S. Kristiansen	NDP
Mission - Port Moody	97,939	49,323	23,224	M. Rose	NDP
Nanaimo - Alberni	95,904	49,060	24,082	T. Miller	NDP
New Westminster - Coquitlam	85,081	42,106	19,498	Pauline Jewett	PC
North Vancouver - Burnaby	86,576	44,105	16,774	C. Cook	PC
Okanagan North	105,092	51,410	24,983	V. Dantzer	PC
Okanagan - Similkameen	81,582	42,676	19,161	F. King	PC
Prince George - Bulkley Valley	81,686	32,115	12,640	L. McCuish	PC
Prince George - Peace River	69,146	26,160	13,593	F. Oberle	PC
Richmond - South Delta	109,365	56,267	29,192	T. Siddon	PC
Skeena	68,918	26,898	13,280	J. Fulton	NDP
Surrey - White Rock - North Delta	104,312	57,651	28,151	B. Friesen	PC
Vancouver Centre	81,582	46,873	16,462	Pat Carney	PC
Vancouver East	78,293	32,718	14,245	Margaret Anne Mitchell	NDP
Vancouver Kingsway	85,613	36,289	16,928	I. Waddell	NDP
Vancouver Quadra	83,855	45,672	20,993	W. Clarke	PC
Vancouver South	85,066	41,936	22,288	J.A. Fraser	PC
Victoria	88,151	49,952	25,068	A. McKinnon	PC
<b>YUKON</b> (1 member)					
Yukon	21,836	9,698	3,926	E. Nielsen	PC
<b>NORTHWEST TERRITORIES</b> (2 members)					
Nunatsiag	14,913	5,713	2,688	P. Ittinuar	NDP
Western Arctic	27,696	10,606	3,556	D. Nickerson	PC

<sup>1</sup>Party standings as a result of the general election, Feb. 18, 1980: Liberal 147, Progressive Conservative 103 and New Democratic 32.

<sup>2</sup>Postponed election - election held on March 24, 1980.

<sup>3</sup>Speaker of the House of Commons.

<sup>4</sup>Leader of a political party.

19.5 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-third general election, Sept. 4, 1984

Province and electoral district	Population, Census 1981	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
NEWFOUNDLAND (7 members)					
Bonavista - Trinity - Conception	76,672	34,795	19,015	Morrissey Johnson	PC
Burin - St. George's	64,017	28,094	13,184	Joe Price	PC
Gander - Twillingate	78,160	30,460	16,100	George Baker	Lib.
Grand Falls - White Bay - Labrador	78,877	28,831	12,938	William Rompkey	Lib.
Humber - Port au Port - St. Barbe	80,164	36,221	17,409	Brian Tobin	Lib.
St. John's East	94,029	39,604	30,866	James A. McGrath	PC
St. John's West	95,762	44,486	33,696	John C. Crosbie	PC
PRINCE EDWARD ISLAND (4 members)					
Cardigan	31,736	19,912	10,566	Pat Binns	PC
Egmont	30,610	17,711	8,777	George Henderson	Lib.
Hillsborough	27,532	17,328	9,158	Tom McMillan	PC
Malpeque	32,628	18,850	10,577	Mel Gass	PC
NOVA SCOTIA (11 members)					
Annapolis Valley - Hants	82,860	44,003	23,580	J. Patrick Nowlan	PC
Cape Breton - East Richmond	64,503	36,517	20,270	Dave Dingwall	Lib.
Cape Breton Highlands - Canso	65,883	38,949	19,371	Lawrence I. O'Neil	PC
Cape Breton - The Sydneys	65,970	36,568	16,051	Russell MacLellan	Lib.
Central Nova	64,441	35,303	21,462	Elmer M. MacKay	PC
Cumberland - Colchester	78,455	42,374	24,180	Robert C. Coates	PC
Dartmouth - Halifax East	100,016	50,405	27,549	Mike Forrestall	PC
Halifax	72,143	42,225	18,779	Stewart McInnes	PC
Halifax West	106,470	56,027	30,287	Howard E. Crosby	PC
South Shore	76,200	39,578	22,347	Lloyd R. Crouse	PC
South West Nova	70,501	40,936	20,604	Gerald Comeau	PC
NEW BRUNSWICK (10 members)					
Carleton - Charlotte	65,764	32,399	19,864	Fred McCain	PC
Fundy - Royal	86,939	46,239	26,021	Robert A. Corbett	PC
Gloucester	71,999	42,929	23,524	Roger Clinch	PC
Madawaska - Victoria	57,247	31,880	16,411	Bernard Valcourt	PC
Moncton	90,649	52,619	29,936	Dennis H. Cochrane	PC
Northumberland - Miramichi	56,362	31,965	17,134	W.R. Bud Jardine	PC
Restigouche	54,750	31,156	14,089	Al Girard	PC
Saint John	67,986	32,092	16,604	G.S. Gerald Merrithew	PC
Westmorland - Kent	60,469	35,588	14,709	Fernand Robichaud	Lib.
York - Sunbury	84,238	42,983	25,190	J. Robert Howie	PC
QUEBEC (75 members)					
Abitibi	102,508	45,228	23,230	Guy St-Julien	PC
Argenteuil - Papineau	66,832	38,062	21,105	Lise Bourgault	PC
Beauce	81,531	47,624	25,028	Gilles Bernier	PC
Beauharnois - Salaberry	76,867	44,273	27,614	Jean-Guy Hudon	PC
Bellechasse	80,487	42,460	24,357	Pierre Blais	PC
Berthier - Maskinongé - Lanaudière	71,466	45,325	31,189	Robert de Cotret	PC
Blainville - Deux-Montagnes	112,015	62,100	28,863	Monique Landry	PC
Bonaventure - Îles-de-la-Madeleine	59,678	31,395	15,502	Darryl L. Gray	PC
Brome - Missisquoi	73,932	41,251	21,678	Gabrielle Bertrand	PC
Chambly	113,126	61,826	31,535	Richard Grisé	PC
Champlain	78,848	46,413	27,467	Michel Champagne	PC
Charlesbourg	133,515	72,594	37,592	Monique B. Tardif	PC
Charlevoix	73,556	37,660	23,661	Charles Hamelin	PC
Châteauguay	88,781	46,688	21,318	Ricardo Lopez	PC
Chicoutimi	68,018	36,981	22,304	André Harvey	PC
Drummond	74,977	42,828	23,693	Jean-Guy Guibault	PC
Frontenac	70,117	39,938	28,246	Marcel Masse	PC
Gaspé	60,116	31,773	19,128	Charles-Eugène Marin	PC
Gatineau	100,582	51,191	25,873	Claudy Mailly	PC
Hull - Aylmer	82,864	42,530	17,058	Gaston Isabelle	Lib.
Joliette	93,114	53,165	38,839	Roch La Salle	PC
Jonquière	69,001	36,957	18,217	Jean-Pierre Blackburn	PC
Kamouraska - Rivière-du-Loup	71,831	37,336	19,651	André Plourde	PC
Labelle	92,677	51,581	28,286	Fernand Ladouceur	PC
Lac-Saint-Jean	78,074	41,465	25,270	Clément M. Côté	PC
Langelier	64,264	39,875	16,872	Michel Côté	PC
La Prairie	116,582	64,435	26,506	Fernand Jourdenais	PC
Lévis	115,058	65,779	32,338	Gabriel Fontaine	PC
Longueuil	124,320	61,757	28,956	Nic Leblanc	PC
Lotbinière	81,988	46,899	22,584	Maurice Tremblay	PC
Louis-Hébert	103,135	64,613	29,420	Suzanne Duplessis	PC

# 19.5 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-third general election, Sept. 4, 1984 (continued)

Province and electoral district	Population, Census 1981	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>QUEBEC (concluded)</b>					
Manicouagan	81,851	39,704	28,208	Brian Mulroney <sup>2</sup>	PC
Matapédia - Matane	58,877	30,665	15,994	Jean-Luc Joncas	PC
Mégantic - Compton - Stanstead	78,712	43,192	25,679	François Gérin	PC
Montmorency - Orléans	86,082	49,011	22,753	Anne Blouin	PC
Pontiac - Gatineau - Labelle	69,921	35,551	21,754	Barry Moore	PC
Portneuf	84,395	47,004	23,797	Marc Ferland	PC
Québec-Est	76,221	41,752	19,782	Marcel R. Tremblay	PC
Richelieu	82,805	49,201	28,747	Louis Plamondon	PC
Richmond - Wolfe	65,386	35,546	18,069	Alain Tardif	Lib.
Rimouski - Témiscouata	78,348	42,999	25,516	Monique Vézina	PC
Roberval	70,582	37,469	22,981	Benoit Bouchard	PC
Saint-Hyacinthe - Bagot	84,350	49,087	22,984	Andrée P. Champagne	PC
Saint-Jean	90,040	52,232	30,769	André Bissonnette	Lib.
Saint-Maurice	69,985	41,411	24,050	Jean Chrétien	Lib.
Shefford	97,010	54,463	25,483	Jean Lapierre	Lib.
Sherbrooke	77,989	43,666	22,232	Jean J. Charest	PC
Témiscamingue	80,283	40,756	20,347	Gabriel Desjardins	PC
Terrebonne	136,651	74,302	43,822	Robert Toupin	PC
Trois-Rivières	73,360	42,516	26,843	Pierre H. Vincent	PC
Verchères	121,766	69,897	38,690	Marcel Danis	PC
Island of Montréal and Île-Jésus					
Bourassa	98,777	46,888	20,221	Carlo Rossi	Lib.
Dollard	109,651	57,357	26,076	Gerry Weiner	PC
Duvernay	103,110	60,392	29,877	Vincent Della Noce	PC
Gamelin	84,540	47,661	20,870	Michel Gravel	PC
Hochelaga - Maisonneuve	68,311	32,937	13,244	Edouard Desrosiers	PC
Lachine	80,788	47,356	24,301	Robert E.J. Layton	PC
LaSalle	92,452	50,426	23,238	Claude Lanthier	Lib.
Laurier	63,454	27,358	9,302	David Berger	PC
Laval	116,555	65,891	30,696	Guy Ricard	Lib.
Laval-des-Rapides	94,898	52,734	22,789	Raymond Garneau	PC
Montréal - Mercier	96,248	55,094	25,071	Carole Jacques	Lib.
Montréal - Sainte-Marie	67,787	32,173	13,668	Jean-Claude Malépart	Lib.
Mount Royal	88,252	48,283	22,716	Sheila Finestone	Lib.
Notre-Dame-de-Grâce - Lachine Est	80,682	41,665	17,910	Warren Allmand	Lib.
Outremont	77,598	35,936	14,508	Lucie Pépin	Lib.
Papineau	70,735	33,366	12,754	André Ouellet	Lib.
Rosemont	73,730	38,052	15,782	Suzanne Blais-Grenier	PC
Saint-Denis	80,815	39,324	18,750	Marcel Prud'homme	Lib.
Saint-Henri - Westmount	78,283	40,722	18,244	Donald J. Johnston	Lib.
Saint-Jacques	65,467	27,905	10,875	Jacques Guibault	Lib.
Saint-Léonard - Anjou	123,178	60,395	24,520	Alfonso Gagliano	Lib.
Saint-Michel - Ahuntsic	79,124	41,336	17,269	Thérèse Killens	Lib.
Vaudreuil	124,490	69,502	37,499	Pierre H. Cadieux	PC
Verdun - Saint-Paul	75,004	40,626	17,378	Gilbert Chartrand	PC
<b>ONTARIO</b>					
(95 members)					
Algoma	81,560	37,104	14,113	Maurice Foster	Lib.
Brampton - Georgetown	171,431	85,471	47,743	John McDermid	PC
Brant	104,427	52,541	23,103	Derek Blackburn	NDP
Bruce - Grey	77,144	42,782	27,611	Gary M. Gurbir	PC
Burlington	114,853	60,982	37,577	Bill Kempling	PC
Cambridge	82,150	38,311	22,963	Chris Speyer	PC
Cochrane - Superior	62,383	29,746	12,359	Keith Penner	Lib.
Durham - Northumberland	79,582	42,279	24,968	Allan Lawrence	PC
Elgin	69,707	34,882	23,302	John Wise	PC
Erie	70,271	34,555	19,197	Girve Fretz	PC
Essex - Kent	72,984	32,348	18,661	Jim Caldwell	NDP
Essex - Windsor	107,994	47,923	18,746	Steven W. Langdon	Lib.
Glengarry - Prescott - Russell	82,706	49,333	26,057	Don Boudria	PC
Grey - Simcoe	72,532	39,229	23,342	Gus Mitges	PC
Guelph	84,864	47,281	23,484	William C. Winegard	PC
Haldimand - Norfolk	89,456	46,456	27,296	Bud Bradley	PC
Halton	116,628	63,163	38,076	Otto Jelinek	PC
Hamilton East	76,238	38,712	14,533	Sheila Copps	Lib.
Hamilton Mountain	91,941	52,671	25,789	Ian Deans	NDP
Hamilton - Wentworth	88,205	49,445	25,595	Geoff Scott	PC
Hamilton West	84,601	41,378	16,573	Peter Peterson	PC
Hastings - Frontenac - Lennox and Addington	68,928	35,695	19,996	Bill Vankoughnet	PC
Huron - Bruce	67,814	37,133	23,969	Murray Cardiff	PC
Kenora - Rainy River	76,073	36,049	13,319	John Parry	NDP
Kent	80,690	37,590	18,279	Elliott Hardey	PC
Kingston and the Islands	89,121	47,556	25,997	Flora MacDonald	PC
Kitchener	114,359	57,277	26,710	John Reimer	PC
Lambton - Middlesex	76,223	41,424	22,501	Sid Fraleigh	PC
Lanark - Renfrew - Carleton	77,419	45,551	24,395	Paul Dick	PC
Leeds - Grenville	80,941	44,043	26,961	Jennifer Cossitt	PC

# 19.5 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-third general election, Sept. 4, 1984 (continued)

Province and electoral district	Population, Census 1981	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
ONTARIO (concluded)					
Lincoln	100,453	53,979	26,318	Shirley Martin	PC
London - East	79,890	38,655	18,154	Jim Jepsen	PC
London - Middlesex	84,225	39,710	18,586	Terry Clifford	PC
London - West	115,921	67,375	34,517	Tom Hockin	PC
Mississauga North	192,795	95,618	47,124	Robert Horner	PC
Mississauga South	122,262	58,614	32,946	Don Blenkarn	PC
Nepean - Carleton	121,937	74,737	41,663	Bill Tupper	PC
Niagara Falls	83,146	41,879	22,852	Rob Nicholson	PC
Nickel Belt	87,957	44,660	17,141	John R. Rodriguez	NDP
Nipissing	68,738	36,700	17,247	Moe Mantha	PC
Northumberland	76,775	38,785	24,060	George Hees	PC
Ontario	111,134	62,884	35,163	Scott Fennell	PC
Oshawa	117,519	59,620	25,092	Ed Broadbent <sup>2</sup>	NDP
Ottawa - Carleton	132,508	77,922	34,693	Barry Turner	PC
Ottawa Centre	87,502	52,271	17,844	Michael Cassidy	NDP
Ottawa - Vanier	79,102	43,934	21,401	Jean-Robert Gauthier	Lib.
Ottawa West	89,596	54,739	26,591	David Daubney	PC
Oxford	85,920	45,137	25,642	Bruce Halliday	PC
Parry Sound - Muskoka	72,050	39,903	22,739	Stan Darling	PC
Perth	66,096	35,062	19,186	A.H. Harry Brightwell	PC
Peterborough	93,352	51,617	27,121	Bill Domm	PC
Prince Edward - Hastings	75,207	38,998	21,034	Jack R. Ellis	PC
Renfrew - Nipissing - Pembroke	80,740	43,389	19,502	Len Hopkins	Lib.
St. Catharines	104,663	53,805	26,621	Joe Reid	PC
Sarnia - Lambton	83,951	44,372	24,066	Ken James	PC
Sault Ste Marie	64,422	34,249	13,135	Jim Kelleher	PC
Simcoe North	83,204	45,528	24,887	Doug Lewis	PC
Simcoe South	102,682	53,075	30,702	Ronald A. Stewart	PC
Stormont - Dundas	87,375	46,017	21,043	Norm Warner	PC
Sudbury	81,672	43,902	18,012	Douglas C. Frith	Lib.
Thunder Bay - Atikokan	64,978	35,580	14,715	Iain Angus	NDP
Thunder Bay - Nipigon	73,768	37,616	13,901	Ernie Epp	NDP
Timiskaming	55,186	28,631	15,359	John A. MacDougall	PC
Timmins - Chapleau	64,187	32,013	11,944	Aurèle Gervais	PC
Victoria - Haliburton	89,280	49,816	30,229	William C. Scott	PC
Waterloo	108,987	56,864	31,898	Walter McLean	PC
Welland	80,215	44,265	18,418	Allan Pietz	PC
Wellington - Dufferin - Simcoe	87,379	43,879	29,983	Perrin Beatty	PC
Windsor - Walkerville	81,968	40,073	14,604	Howard McCurdy	NDP
Windsor West	77,281	33,982	13,624	Herb Gray	Lib.
York North	144,489	88,791	32,200	Anthony Roman	Ind.
York - Peel	113,975	60,552	37,493	Sinclair Stevens	PC
Metropolitan Toronto					
Beaches	73,174	36,949	14,914	Neil Young	NDP
Broadview - Greenwood	72,761	33,324	15,066	Lynn McDonald	PC
Davenport	72,032	25,047	13,248	Charles L. Caccia	Lib.
Don Valley East	109,082	54,907	29,706	Bill Attewell	PC
Don Valley West	85,116	50,199	29,905	John W. Bosley <sup>3</sup>	PC
Eglinton - Lawrence	84,953	43,860	18,645	Roland de Corneille	Lib.
Etobicoke Centre	102,992	60,223	34,026	Michael Wilson	PC
Etobicoke - Lakeshore	83,674	44,856	19,902	Patrick Boyer	PC
Etobicoke North	112,047	56,484	22,713	Bob Pennock	PC
Parkdale - High Park	79,839	39,803	15,879	Andrew Witer	PC
Rosedale	84,668	44,314	23,211	David Crombie	PC
St. Paul's	75,723	44,265	20,914	Barbara McDougall	PC
Scarborough Centre	86,626	43,159	19,968	Pauline Browes	PC
Scarborough East	98,443	47,732	26,349	Robert Hicks	PC
Scarborough West	84,239	41,894	17,028	Reginald Stackhouse	PC
Spadina	73,052	34,318	13,241	Dan Heap	NDP
Trinity	76,166	22,764	9,811	Aideen Nicholson	Lib.
Willowdale	91,369	51,997	22,425	John Ostrom	PC
York Centre	102,686	41,290	20,810	Robert Kaplan	Lib.
York East	98,779	46,785	21,978	Alan Redway	PC
York - Scarborough	207,803	100,946	48,809	W. Paul McCrossan	PC
York South - Weston	87,699	38,094	14,217	John V. Nunziata	Lib.
York West	94,472	40,098	17,629	Sergio Marchi	Lib.
MANITOBA (14 members)					
Brandon - Souris	72,135	36,141	18,813	Lee Clark	PC
Churchill	59,935	23,869	10,829	Rod Murphy	NDP
Dauphin - Swan River	54,713	28,238	11,973	Brian White	PC
Lisgar	67,094	31,531	15,557	Jack Murta	PC
Portage - Marquette	61,434	31,246	15,378	Charles Mayer	PC
Provencher	73,729	34,544	20,077	Jake Epp	PC
St. Boniface	87,194	49,372	19,548	Leo Duguay	PC
Selkirk - Interlake	66,387	33,898	13,750	Felix Holtmann	PC
Winnipeg - Assiniboine	96,866	52,855	27,567	Dan McKenzie	PC
Winnipeg - Birds Hill	97,775	52,344	23,903	Bill Blaikie	NDP

### 19.5 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-third general election, Sept. 4, 1984 (continued)

Province and electoral district	Population, Census 1981	Total votes polled (incl. rejections)	Votes polled by member	Name of member	Party affiliation <sup>1</sup>
<b>MANITOBA (concluded)</b>					
Winnipeg - Fort Garry	81,057	46,780	21,286	Lloyd Axworthy	Lib.
Winnipeg North	87,727	42,384	18,209	David Orlikow	NDP
Winnipeg North Centre	59,697	23,210	10,559	Cyril Keeper	NDP
Winnipeg - St. James	60,498	29,641	12,523	George Minaker	PC
<b>SASKATCHEWAN (14 members)</b>					
Assiniboia	59,484	34,044	16,026	Len Gustafson	PC
Humboldt - Lake Centre	62,871	34,778	15,087	Vic Althouse	NDP
Kindersley - Lloydminster	65,459	35,163	20,436	Bill McKnight	PC
Mackenzie	56,985	28,593	11,403	Jack Scowen	PC
Moose Jaw	62,232	34,443	15,803	William Andrew Gottselig	PC
Prince Albert	73,130	37,663	13,359	Stan J. Hovdebo	NDP
Qu'Appelle - Moose Mountain	84,776	29,189	14,470	Alvin Hamilton	PC
Regina East	81,783	45,761	20,474	Simon de Jong	NDP
Regina West	92,633	51,173	23,865	Les Benjamin	NDP
Saskatoon East	75,369	46,422	17,087	Don Ravis	PC
Saskatoon West	101,601	52,616	26,012	Ray Hnatyshyn	PC
Swift Current - Maple Creek	53,255	29,433	14,590	Geoff Wilson	PC
The Battlefords - Meadow Lake	64,421	29,865	12,895	John Gormley	PC
Yorkton - Melville	64,314	35,423	18,116	Lorne Nystrom	NDP
<b>ALBERTA (21 members)</b>					
Athabasca	93,492	35,234	23,997	Jack Shields	PC
Bow River	109,047	56,692	43,033	Gordon E. Taylor	PC
Calgary Centre	81,734	37,728	24,924	Harvie Andre	PC
Calgary East	155,450	62,861	36,825	Alex Kindy	PC
Calgary North	106,318	54,026	39,207	Paul Gagnon	PC
Calgary South	140,677	71,498	55,590	Barbara Sparrow	PC
Calgary West	102,699	50,418	37,565	Jim Hawkes	PC
Crowfoot	67,536	33,858	26,291	Arnold Malone	PC
Edmonton East	85,753	33,397	16,119	Bill Lesick	PC
Edmonton North	127,931	50,861	29,074	Steve E. Paproski	PC
Edmonton South	103,431	52,133	32,510	Jim Edwards	PC
Edmonton - Strathcona	116,322	55,016	33,712	David Kilgour	PC
Edmonton West	98,651	43,923	25,764	Murray Dorin	PC
Lethbridge - Foothills	101,457	46,614	31,316	Blaine A. Thacker	PC
Medicine Hat	98,905	44,953	33,978	Bob Porter	PC
Peace River	99,542	41,292	25,648	Albert Cooper	PC
Pembina	138,712	62,493	44,026	Peter Elzinga	PC
Red Deer	116,981	55,387	41,695	Gordon Towers	PC
Vegreville	83,312	40,611	32,480	Don Mazankowski	PC
Wetaskiwin	94,406	42,566	30,128	Stan Schellenberger	PC
Yellowhead	115,368	50,713	37,462	Joe Clark	PC
<b>BRITISH COLUMBIA (28 members)</b>					
Burnaby	102,741	59,190	28,318	Svend J. Robinson	NDP
Capilano	84,735	50,793	28,616	Mary Collins	PC
Cariboo - Chilcotin	86,248	37,796	20,553	Lorne Greenaway	PC
Comox - Powell River	121,154	61,321	27,288	Ray Skelly	NDP
Cowichan - Malahat - The Islands	99,422	54,639	24,555	Jim Manly	NDP
Esquimalt - Saanich	112,003	65,952	31,766	Patrick Crofton	PC
Fraser Valley East	109,635	53,670	32,073	Ross Belsher	PC
Fraser Valley West	128,043	66,001	35,984	Robert L. Wenman	PC
Kamloops - Shuswap	108,008	56,555	30,512	Nelson A. Riis	NDP
Kootenay East - Revelstoke	80,237	39,108	18,129	Stan Graham	PC
Kootenay West	64,742	33,426	15,804	Bob Brisco	PC
Mission - Port Moody	120,321	64,648	30,678	Gerry St. Germain	PC
Nanaimo - Alberni	111,790	60,024	27,410	Ted Schellenberg	PC
New Westminster - Coquitlam	84,896	45,933	21,134	Pauline Jewett	NDP
North Vancouver - Burnaby	87,980	49,996	21,750	Chuck Cook	PC
Okanagan North	121,584	64,259	35,904	Vincent M. Dantzer	PC
Okanagan - Similkameen	95,249	52,006	27,071	Fred King	PC
Prince George - Bulkley Valley	94,638	38,465	18,897	Lorne McCuish	PC
Prince George - Peace River	81,168	33,977	21,154	Frank Oberle	PC
Richmond - South Delta	128,565	69,046	38,168	Tom Siddon	PC
Skeena	75,509	31,055	14,174	Jim Fulton	NDP
Surrey - White Rock - North Delta	137,642	73,990	39,544	Benno Friesen	PC
Vancouver Centre	83,692	50,548	21,704	Pat Carney	PC
Vancouver East	81,676	36,007	18,464	Margaret Anne Mitchell	NDP
Vancouver Kingsway	87,470	39,740	20,179	Ian Waddell	NDP
Vancouver Quadra	80,931	49,824	21,794	John N. Turner <sup>2</sup>	Lib.
Vancouver South	85,454	46,632	25,469	John A. Fraser	PC
Victoria	88,934	53,303	24,588	Allan B. McKinnon	PC

19.5 Electoral districts, votes polled and names of members of the House of Commons as elected at the thirty-third general election, Sept. 4, 1984 (concluded)

Province and electoral district	Popu-lation, Census 1981	Total votes polled (incl. rejec-tions)	Votes polled by member	Name of member	Party affili-ation <sup>1</sup>
YUKON (1 member)					
Yukon	23,153	11,731	6,648	Erik Nielsen	PC
NORTHWEST TERRITORIES (2 members)					
Nunatsiag	16,973	6,935	2,237	Thomas Suluk	PC
Western Arctic	28,768	12,703	5,822	Dave Nickerson	PC

<sup>1</sup>Party standings as a result of the general election, Sept. 4, 1984: Progressive Conservative 211, Liberal 40, New Democratic 30 and one Independent.  
<sup>2</sup>Leader of a political party.  
<sup>3</sup>Speaker of the House of Commons.

19.6 Voters on the lists and votes polled at the federal general elections of 1972, 1974, 1979, 1980 and 1984

Province or territory	Voters on the lists				
	1972	1974	1979	1980	1984
Newfoundland	289,294	304,370	338,730	346,281	365,937
Prince Edward Island	68,992	73,069	80,332	83,976	86,098
Nova Scotia	492,001	524,767	567,648	592,992	608,410
New Brunswick	387,136	406,518	456,707	473,972	487,509
Quebec	3,693,918	3,848,426	4,281,669	4,395,389	4,558,932
Ontario	4,601,282	4,803,485	5,328,123	5,597,683	5,851,634
Manitoba	610,568	633,411	670,098	687,702	702,500
Saskatchewan	558,876	569,316	619,144	639,649	671,574
Alberta	955,531	1,016,314	1,249,688	1,315,770	1,476,365
British Columbia	1,312,832	1,407,066	1,604,890	1,718,562	1,847,855
Yukon <sup>1</sup>	10,857	12,312	13,785	14,046	15,014
Northwest Territories	19,491 <sup>2</sup>	21,299 <sup>2</sup>	24,183	24,394	28,737
Total	13,000,778	13,620,353	15,234,997	15,890,416	16,700,565
Province or territory	Votes polled				
	1972	1974	1979	1980	1984
Newfoundland	182,482	175,534	203,271	204,092	242,491
Prince Edward Island	59,078	58,649	65,131	66,558	73,801
Nova Scotia	391,590	388,830	427,746	424,055	462,885
New Brunswick	298,164	289,492	339,560	337,544	379,895
Quebec	2,790,172	2,592,801	3,253,017	2,994,202	3,485,805
Ontario	3,650,542	3,581,767	4,164,502	4,018,101	4,461,416
Manitoba	453,642	448,431	515,483	477,282	515,953
Saskatchewan	442,246	415,268	490,732	457,239	524,566
Alberta	722,338	684,649	855,537	797,394	1,022,274
British Columbia	961,441	1,014,219	1,198,922	1,213,030	1,437,904
Yukon <sup>1</sup>	8,638	8,354	10,240	9,698	11,731
Northwest Territories	14,328 <sup>2</sup>	13,008 <sup>2</sup>	16,859	16,319	19,638
Total	9,974,661	9,671,002	11,541,000	11,015,514	12,638,314

<sup>1</sup>Electoral district of Yukon.  
<sup>2</sup>Electoral district of Northwest Territories. (NWT has been divided into two electoral districts since 1976.)

## 19.7 Provinces and territories of Canada, dates of admission to Confederation, legislative processes by which admission was effected, present area and seat of government

Province, territory or district	Date of admission or creation	Legislative process	Present area km <sup>2</sup>	Seat of provincial or territorial government
Ontario <sup>1</sup>	July 1, 1867	Act of Imperial Parliament - The British North	1 068 580	Toronto
Quebec <sup>2</sup>	July 1, 1867	America Act, 1867 (Br. Stat. 1867, c. 3) and	1 540 680	Quebec
Nova Scotia	July 1, 1867	Imperial Order in Council, May 22, 1867	55 490	Halifax
New Brunswick	July 1, 1867		73 440	Fredericton
Manitoba <sup>3</sup>	July 15, 1870	Manitoba Act, 1870 (SC 1870, c. 3) and Imperial Order in Council, June 23, 1870	649 950	Winnipeg
British Columbia	July 20, 1871	Imperial Order in Council, May 16, 1871	947 800	Victoria
Prince Edward Island	July 1, 1873	Imperial Order in Council, June 26, 1873	5 660	Charlottetown
Saskatchewan <sup>4</sup>	Sept. 1, 1905	Saskatchewan Act, 1905 (SC 1905, c. 42)	652 330	Regina
Alberta <sup>4</sup>	Sept. 1, 1905	Alberta Act, 1905 (SC 1905, c. 3)	661 190	Edmonton
Newfoundland	Mar. 31, 1949	The British North America Act, 1949 (Br. Stat. 1949 c. 22)	405 720	St. John's
Northwest Territories <sup>5</sup>	July 15, 1870	Act of Imperial Parliament - Rupert's Land Act, 1868 (Br. Stat. 1868, c. 105) and Imperial Order in Council, June 23, 1870	3 426 320	
Mackenzie <sup>6</sup>	Jan. 1, 1920		1 382 740	
Keewatin <sup>6</sup>	Jan. 1, 1920	Order in Council, Mar. 16, 1918	600 590	Yellowknife
Franklin <sup>6</sup>	Jan. 1, 1920		1 422 990	
Yukon Territory <sup>7</sup>	June 13, 1898	Yukon Territory Act, 1898 (SC 1898, c. 6)	483 450	Whitehorse
Canada			9 970 610 <sup>8</sup>	

<sup>1</sup>The area of Ontario was extended by the Ontario Boundaries Extension Act, 1912, (SC 1912, c. 40).

<sup>2</sup>Extended by Quebec Boundaries Extension Act, 1912 (SC 1912, c. 45).

<sup>3</sup>Extended by the Extension of Boundaries Act of Manitoba, 1881 and the Manitoba Boundaries Extension Act, 1912 (SC 1912, c. 32).

<sup>4</sup>Saskatchewan and Alberta created as provinces in 1905 from the area formerly comprised in the provisional districts of Assiniboia, Athabasca, Alberta and Saskatchewan established May 17, 1882 by minute of Canadian Privy Council concurred in by Dominion Parliament and Order in Council, Oct. 2, 1895.

<sup>5</sup>By an Imperial Order in Council passed on June 23, 1870 pursuant to the Rupert's Land Act, 1868 (Br. Stat. 1868, c. 105), the former territories of the Hudson's Bay Company known as Rupert's Land and the North-Western Territory were transferred to Canada effective July 15, 1870. These territories were designated as the North-West Territories by the Act of SC 1869, c. 3, and as the Northwest Territories by RSC 1906, c. 62. By Imperial Order in Council of July 31, 1880 (effective Sept. 1, 1880), all British territories and possessions in North America not already included within Canada and all islands adjacent thereto (with the exception of the Colony of Newfoundland and its dependencies) were annexed to Canada and these additional territories were formally included in the North-West Territories by SC 1905, c. 27. The province of Manitoba was formed out of a portion of the territories by the Manitoba Act, 1870 (SC 1870, c. 3) and a further portion was added to Manitoba in 1881 by SC 1881, c. 14. The provinces of Alberta and Saskatchewan were formed out of portions of the territories in 1905 and in 1912 other portions were added to Manitoba, Ontario and Quebec.

<sup>6</sup>By SC 1876, c. 21, a separate district to be known as the District of Keewatin was established and provision was made for the local government thereof. The Act was expressed to come into force by proclamation. It provided that portions of the District might be re-annexed to the North-West Territories by proclamation; in 1886 a portion of the District of Keewatin was re-annexed and in 1905 the entire Keewatin District was re-annexed. The Act of 1876 was never proclaimed. By Order in Council of May 8, 1882 the provisional districts of Assiniboia, Saskatchewan, Alberta and Athabasca were created for the convenience of settlers and for postal purposes. By Order in Council of Oct. 2, 1895 the further provisional districts of Ungava, Franklin, Mackenzie and Yukon were created. The boundaries of these provisional districts were re-defined by Order in Council of Dec. 18, 1897. Subsequently the Yukon Territory was formed, the provinces of Alberta and Saskatchewan were created and other portions of the territories were annexed to Quebec, Ontario and Manitoba. By Order in Council dated Mar. 16, 1918 (effective Jan. 1, 1920) the remaining portions of the Northwest Territories were divided into three provisional districts known as Mackenzie, Keewatin and Franklin.

<sup>7</sup>The provisional district of Yukon established in 1895 was created a judicial district of the North-West Territories by proclamation issued pursuant to Sect. 51 of the North-West Territories Act (RSC 1886, c. 50) on Aug. 16, 1897 and, by the Yukon Territory Act (SC 1898, c. 6), was declared to be a separate territory.

<sup>8</sup>Recalculated figures 1981.

## 19.8 Number of municipalities classified by type and size group, by province, as at Jan. 1, 1980-83

Year, type and size group	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	Canada
1980													
TYPE													
Regional municipalities	—	—	—	—	75	39	—	—	—	28	—	—	142
Metropolitan and regional municipalities <sup>1</sup>	—	—	—	—	3	12	—	—	—	—	—	—	15
Counties and regional districts	—	—	—	—	72	27	—	—	—	28	—	—	127
Unitary municipalities	168	38	65	115	1,520	789	185	794	332	140	3	7	4,156
Cities <sup>2</sup>	2	1	3	6	65	47	5	11	10	33	2	1	186
Towns	166	8	38	21	195	144	35	138	107	11	1	5	869
Villages	—	29	—	88	247	120	40	346	167	58	—	1	1,096
Rural municipalities <sup>3</sup>	—	—	24	—	1,013	478	105	299	48	38	—	—	2,005
Quasi-municipalities <sup>4</sup>	140	—	—	—	—	11	17	—	19	329	4	18	538
Total	308	38	65	115	1,595	839	202	794	351	497	7	25	4,836

# 19.8 Number of municipalities classified by type and size group, by province, as at Jan. 1, 1980-83 (continued)

Year, type and size group	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	Canada
<b>POPULATION SIZE GROUP</b> (1976 Census)													
Unitary municipalities													
Over 100,000	—	—	1	—	4	17	1	2	2	3	—	—	30
50,000 - 99,999	1	—	2	2	14	14	—	—	—	9	—	—	42
10,000 - 49,999	4	1	17	5	71	78	3	6	14	26	1	—	226
Under 10,000	163	37	45	108	1,431	680	181	786	316	102	2	7	3,858
<b>Total</b>	<b>168</b>	<b>38</b>	<b>65</b>	<b>115</b>	<b>1,520</b>	<b>789</b>	<b>185</b>	<b>794</b>	<b>332</b>	<b>140</b>	<b>3</b>	<b>7</b>	<b>4,156</b>
<b>1981</b>													
<b>TYPE</b>													
Regional municipalities	—	—	—	—	75	39	—	—	—	28	—	—	142
Metropolitan and regional municipalities <sup>1</sup>	—	—	—	—	3	12	—	—	—	—	—	—	15
Counties and regional districts	—	—	—	—	72	27	—	—	—	28	—	—	127
Unitary municipalities	168	39	66	115	1,526	791	185	797	332	141	3	7	4,170
Cities <sup>2</sup>	2	1	3	6	65	49	5	12	11	34	2	1	191
Towns	166	8	39	21	196	144	35	142	110	10	1	5	877
Villages	—	30	—	88	253	119	40	344	163	58	—	1	1,096
Rural municipalities <sup>3</sup>	—	—	24	—	1,012	479	105	299	48	39	—	—	2,006
Quasi-municipalities <sup>4</sup>	140	—	—	—	—	8	17	—	19	329	5	18	536
<b>Total</b>	<b>308</b>	<b>39</b>	<b>66</b>	<b>115</b>	<b>1,601</b>	<b>838</b>	<b>202</b>	<b>797</b>	<b>351</b>	<b>498</b>	<b>8</b>	<b>25</b>	<b>4,848</b>
<b>POPULATION SIZE GROUP</b> (1976 Census)													
Unitary municipalities													
Over 100,000	—	—	1	—	4	17	1	2	2	3	—	—	30
50,000 - 99,999	1	—	2	2	14	14	—	—	—	9	—	—	42
10,000 - 49,999	4	1	17	5	71	78	3	6	14	26	1	—	226
Under 10,000	163	38	46	108	1,437	682	181	789	316	103	2	7	3,873
<b>Total</b>	<b>168</b>	<b>39</b>	<b>66</b>	<b>115</b>	<b>1,526</b>	<b>791</b>	<b>185</b>	<b>797</b>	<b>332</b>	<b>141</b>	<b>3</b>	<b>7</b>	<b>4,171</b>
<b>1982</b>													
<b>TYPE</b>													
Regional municipalities	—	—	—	—	75	39	—	—	—	28	—	—	142
Metropolitan and regional municipalities <sup>1</sup>	—	—	—	—	3	12	—	—	—	—	—	—	15
Counties and regional districts	—	—	—	—	72	27	—	—	—	28	—	—	127
Unitary municipalities	169	39	66	115	1,527	791	185	799	332	142	3	7	4,175
Cities <sup>2</sup>	2	1	3	6	66	49	5	12	11	35	2	1	193
Towns	167	8	39	21	193	144	35	142	111	10	1	5	876
Villages	—	30	—	88	249	119	40	346	162	56	—	1	1,091
Rural municipalities <sup>3</sup>	—	—	24	—	1,019	479	105	299	48	41	—	—	2,015
Quasi-municipalities <sup>4</sup>	141	—	—	—	—	8	17	—	19	285	5	24	499
<b>Total</b>	<b>310</b>	<b>39</b>	<b>66</b>	<b>115</b>	<b>1,602</b>	<b>838</b>	<b>202</b>	<b>799</b>	<b>351</b>	<b>455</b>	<b>8</b>	<b>31</b>	<b>4,816</b>
<b>POPULATION SIZE GROUP</b> (1976 Census)													
Unitary municipalities													
Over 100,000	—	—	1	—	4	17	1	2	2	3	—	—	30
50,000 - 99,999	1	—	2	2	14	14	—	—	—	9	—	—	42
10,000 - 49,999	4	1	17	6	71	78	3	6	14	26	1	—	227
Under 10,000	164	38	46	107	1,438	682	181	791	316	104	2	7	3,876
<b>Total</b>	<b>169</b>	<b>39</b>	<b>66</b>	<b>115</b>	<b>1,527</b>	<b>791</b>	<b>185</b>	<b>799</b>	<b>332</b>	<b>142</b>	<b>3</b>	<b>7</b>	<b>4,175</b>
<b>1983</b>													
<b>TYPE</b>													
Regional municipalities	—	—	—	—	96	39	—	—	—	28	—	—	163
Metropolitan and regional municipalities <sup>1</sup>	—	—	—	—	3	12	—	—	—	—	—	—	15
Counties and regional districts	—	—	—	—	93	27	—	—	—	28	—	—	148
Unitary municipalities	169	39	66	114	1,518	792	185	805	332	142	3	7	4,172
Cities <sup>2</sup>	2	1	3	6	65	49	5	12	11	35	2	1	192
Towns	167	8	39	23	192	145	35	142	111	10	1	5	878
Villages	—	30	—	85	243	119	40	352	162	55	—	1	1,087
Rural municipalities <sup>3</sup>	—	—	24	—	1,018	479	105	299	48	42	—	—	2,015
Quasi-municipalities <sup>4</sup>	141	—	—	—	—	7	17	—	19	285	5	26	500
<b>Total</b>	<b>310</b>	<b>39</b>	<b>66</b>	<b>114</b>	<b>1,614</b>	<b>838</b>	<b>202</b>	<b>805</b>	<b>351</b>	<b>455</b>	<b>8</b>	<b>33</b>	<b>4,835</b>

## 19.8 Number of municipalities classified by type and size group, by province, as at Jan. 1, 1980-83 (concluded)

Year, type and size group	Nfld.	PEI	NS	NB	Que.	Ont.	Man.	Sask.	Alta.	BC	YT	NWT	Canada
<b>POPULATION SIZE GROUP</b> (1981 Census)													
Unitary municipalities	—	—	1	—	4	17	1	2	2	3	—	—	30
Over 100,000	—	—	2	2	16	14	—	—	2	9	—	—	46
50,000 - 99,999	5	1	17	4	76	78	4	6	15	30	1	—	237
10,000 - 49,999	163	38	46	108	1,422	683	180	797	313	100	2	7	3,859
Under 10,000													
<b>Total</b>	<b>169</b>	<b>39</b>	<b>66</b>	<b>114</b>	<b>1,518</b>	<b>792</b>	<b>185</b>	<b>805</b>	<b>332</b>	<b>142</b>	<b>3</b>	<b>7</b>	<b>4,172</b>

<sup>1</sup>Includes urban communities in Quebec; and Metropolitan Toronto, regional municipalities and the district municipality of Muskoka in Ontario.

<sup>2</sup>Includes the four boroughs of Metropolitan Toronto.

<sup>3</sup>Includes municipalities in Nova Scotia; parishes, townships, united townships and municipalities without designation in Quebec; townships in Ontario; rural municipalities in Manitoba and Saskatchewan; municipal districts and counties in Alberta; and districts in British Columbia.

<sup>4</sup>Includes local government communities and the metropolitan area in Newfoundland; improvement districts in Ontario and Alberta; local government districts in Manitoba; local improvement districts in British Columbia and Yukon; and hamlets in Northwest Territories.

## 19.9 Federal government employees, by department and sex, 1980-83

Department	Men	Women	Total <sup>1</sup>	Men	Women	Total <sup>1</sup>
	1980			1981		
National Defence (civilian)	24,062	9,862	33,924	24,070	10,317	34,389
National Revenue (Customs and Excise, Taxation)	13,461	10,169	23,630	13,750	11,379	25,129
Employment and Immigration	9,678	13,016	22,694	9,340	13,551	22,892
Transport	16,199	3,071	19,270	16,456	3,516	19,974
Environment	7,651	2,328	9,981	7,657	2,554	10,211
Correctional Service of Canada	7,843	1,821	9,665	7,922	2,058	9,980
Supply and Services	4,882	4,551	9,433	4,968	4,892	9,860
Agriculture	7,041	2,174	9,215	7,038	2,398	9,436
National Health and Welfare	3,268	5,066	8,336	3,288	5,407	8,695
Public Works	6,454	1,773	8,227	6,518	1,966	8,485
Indian Affairs and Northern Development	3,024	2,985	6,009	2,875	2,838	5,713
Fisheries and Oceans	3,856	1,135	4,992	4,011	1,288	5,300
Statistics Canada	2,050	2,292	4,343	2,137	2,408	4,545
Veterans Affairs	1,743	2,001	3,744	1,822	2,309	4,131
Energy, Mines and Resources	2,618	873	3,491	2,860	1,220	4,080
Royal Canadian Mounted Police (civilian)	684	2,828	3,512	706	2,923	3,629
External Affairs	1,762	1,112	2,874	1,984	1,238	3,222
Secretary of State of Canada	1,064	1,869	2,933	1,089	1,948	3,037
Public Service Commission	1,070	1,441	2,512	1,019	1,491	2,510
Industry, Trade and Commerce	1,486	936	2,422	1,523	950	2,473
Communications	1,291	661	1,952	1,364	777	2,141
Consumer and Corporate Affairs	1,290	837	2,127	1,263	873	2,136
Justice	526	596	1,122	557	668	1,225
Regional Economic Expansion	622	481	1,103	630	527	1,157
Canadian International Development Agency	535	438	973	584	496	1,080
National Museums of Canada	589	360	949	558	380	938
Labour	384	376	760	394	419	813
Canadian Grain Commission	645	162	807	616	166	782
Treasury Board (Secretariat)	375	310	685	414	342	756
Public Archives of Canada	432	269	701	444	311	755
Canadian Transport Commission	434	282	716	450	297	747
Finance	329	294	623	360	312	672
National Library of Canada	140	323	463	146	370	516
Canadian Radio-television and Telecommunications Commission	205	170	375	208	185	393
National Energy Board	207	133	340	240	144	384
Canadian Pension Commission	99	198	297	110	197	307
Privy Council Office	120	138	258	118	168	286
National Parole Board	69	156	225	72	174	246
Solicitor General	102	104	206	112	128	240
Insurance	117	60	177	122	61	183
Treasury Board (Office of the Comptroller General)	103	58	161	116	66	182
Prairie Farm Rehabilitation Administration	90	94	184	85	85	170
Science and Technology	78	70	148	78	82	160
Public Service Staff Relations Board	82	77	159	76	83	159
Veterans' Land Administration	130	105	235	78	76	154
Federal Court	66	62	128	71	70	141
Foreign Investment Review Agency	60	52	112	74	55	129

## 19.9 Federal government employees, by department and sex, 1980-83 (continued)

Department	Men	Women	Total <sup>1</sup>	Men	Women	Total <sup>1</sup>
	1980			1981		
Office of the Commissioner of Official Languages	47	53	100	55	71	126
Canadian Human Rights Commission	37	67	104	44	73	117
Bureau of Pensions Advocates	95	114	209	45	69	114
Ministry of State for Economic Development	42	41	83	40	51	91
Office of the Secretary to the Governor General	35	49	84	33	46	79
Federal-Provincial Relations Office	30	38	68	32	39	71
Canadian Labour Relations Board	31	44	75	27	42	69
Ministry of State for Social Development	—	—	—	24	31	55
Supreme Court	28	27	55	26	27	53
Immigration Appeal Board	18	29	47	18	31	49
Office of the Chief Electoral Officer	24	23	47	26	19	45
International Joint Commission	21	18	39	20	16	36
Law Reform Commission of Canada	7	24	31	10	25	35
Tax Review Board	10	21	31	11	22	33
Tariff Board	16	12	28	14	12	26
War Veterans' Allowance Board	12	7	19	17	8	25
Canadian Intergovernmental Conference Secretariat	11	13	24	10	12	22
Office of the Co-ordinator, Status of Women	—	14	14	—	17	17
Restrictive Trade Practices Commission	4	9	13	4	12	16
Pension Review Board	6	9	15	6	9	15
Office of the Commissioner for Federal Judicial Affairs	8	12	20	—	6	6
<b>Total</b>	<b>129,498</b>	<b>78,793</b>	<b>208,299</b>	<b>130,835</b>	<b>84,801</b>	<b>215,643</b>
	1982			1983		
National Defence (civilian) <sup>1</sup>	23,700	10,496	34,197	23,567	10,707	34,274
National Revenue (Customs and Excise, Taxation)	13,879	11,927	25,806	13,768	11,773	25,541
Employment and Immigration	9,563	14,851	24,414	9,679	15,089	24,768
Transport	16,966	3,909	20,875	16,927	4,011	20,938
Environment	7,881	2,831	10,712	7,804	2,788	10,592
Supply and Services	4,981	5,079	10,060	5,005	5,136	10,141
Correctional Service of Canada	7,743	2,153	9,896	7,724	2,401	10,125
Agriculture	7,126	2,592	9,718	6,981	2,567	9,548
National Health and Welfare	3,291	5,713	9,004	3,312	5,722	9,034
Public Works	6,616	2,055	8,672	6,441	2,019	8,460
Indian Affairs and Northern Development	2,922	3,026	5,948	2,898	2,975	5,873
Fisheries and Oceans	4,204	1,400	5,604	4,150	1,385	5,535
Energy, Mines and Resources	3,190	1,473	4,663	3,275	1,598	4,873
Statistics Canada	2,201	2,505	4,706	2,135	2,422	4,557
External Affairs	2,535	1,487	4,022	2,693	1,633	4,326
Royal Canadian Mounted Police <sup>2</sup>	707	2,996	3,703	712	2,967	3,679
Veterans Affairs	1,769	2,328	4,097	1,588	1,914	3,502
Secretary of State of Canada	1,156	2,026	3,182	1,093	2,000	3,093
Industry, Trade and Commerce <sup>3</sup>	1,016	778	1,794	1,429	1,134	2,563
Consumer and Corporate Affairs	1,382	1,017	2,399	1,413	1,064	2,477
Public Service Commission	983	1,508	2,491	967	1,477	2,444
Communications	1,453	800	2,253	1,460	798	2,258
Justice	587	719	1,306	590	741	1,331
Canadian International Development Agency	608	539	1,147	559	530	1,089
National Museums of Canada	564	412	976	571	442	1,013
Finance	419	382	801	448	389	837
Labour	369	424	793	381	417	798
Canadian Grain Commission	610	173	783	601	187	788
Canadian Transport Commission	455	311	766	466	321	787
Public Archives of Canada	452	325	777	454	329	783
Treasury Board (Secretariat)	429	364	793	425	351	776
National Library of Canada	162	386	548	157	387	544
National Energy Board	268	163	431	271	169	440
Canadian Radio-television and Telecommunications Commission	216	195	411	218	186	404
Privy Council Office	134	196	330	143	211	354
Canadian Pension Commission	100	226	326	104	203	307
Solicitor General	118	149	267	113	146	259
National Parole Board	70	180	250	70	182	252
Ministry of State for Economic Development	82	82	164	113	129	242
Insurance	130	72	202	128	71	199
Prairie Farm Rehabilitation Administration	93	90	183	90	97	187
Veterans' Land Administration	87	101	188	78	90	168
Public Service Staff Relations Board	79	89	168	75	91	166
Treasury Board (Office of the Comptroller General)	117	65	182	107	57	164
Federal Court	67	83	150	67	86	153
Foreign Investment Review Agency	75	58	133	66	63	129
Office of the Commissioner of Official Languages	58	76	134	60	65	125
Canadian Human Rights Commission	46	75	121	44	76	120
Science and Technology	79	78	157	64	53	117
Ministry of State for Social Development	31	42	73	34	65	99

### 19.9 Federal government employees, by department and sex, 1980-83 (concluded)

Department	1980			1981		
	Men	Women	Total <sup>1</sup>	Men	Women	Total <sup>1</sup>
	1982			1983		
Bureau of Pensions Advocates	35	63	98	38	58	96
Office of the Secretary to the Governor General	37	54	91	37	53	90
Canadian Labour Relations Board	28	50	78	28	53	81
Office of the Chief Electoral Officer	42	25	67	50	26	76
Federal-Provincial Relations Office	33	33	66	34	31	65
Supreme Court	30	33	63	30	33	63
Immigration Appeal Board	18	35	53	18	36	54
War Veterans' Allowance Board	12	6	18	26	23	49
Law Reform Commission of Canada	11	31	42	11	30	41
International Joint Commission	18	20	38	19	19	38
Tax Review Board	11	22	33	10	24	34
Tariff Board	13	12	25	19	10	29
Office of the Co-ordinator, Status of Women	—	21	21	1	24	25
Canadian Intergovernmental Conference Secretariat	8	10	18	9	15	24
Restrictive Trade Practices Commission	6	12	18	5	12	17
Pension Review Board	5	12	17	2	14	16
Office of the Commissioner for Federal Judicial Affairs	1	8	9	3	11	14
Regional Economic Expansion <sup>3</sup>	581	470	1,051	—	—	—
<b>Total</b>	<b>132,658</b>	<b>89,922</b>	<b>222,582</b>	<b>131,858</b>	<b>90,186</b>	<b>222,044</b>

<sup>1</sup>Includes eight employees in 1980, seven in 1981 and two in 1982 whose sex was not specified on pay documents.

<sup>2</sup>Employees under the *Public Service Employment Act* only.

<sup>3</sup>In 1983, Regional Economic Expansion was integrated with Industry, Trade and Commerce.

### 19.10 Federal government employees by province or territory and sex, 1980-83

Province or territory	1980			1981		
	Men	Women	Total <sup>1</sup>	Men	Women	Total <sup>1</sup>
Newfoundland	3,851	1,024	4,875	3,967	1,256	5,223
Prince Edward Island	968	369	1,337	1,059	443	1,502
Nova Scotia	10,486	3,286	13,772	10,545	3,510	14,056
New Brunswick	4,682	2,323	7,006	4,681	2,505	7,186
Quebec <sup>2</sup>	19,999	10,395	30,396	20,058	11,106	31,167
National capital region (Quebec)	8,310	6,950	15,260	8,425	7,572	15,997
Ontario <sup>2</sup>	21,088	13,548	34,638	21,258	14,644	35,903
National capital region (Ontario)	28,584	21,869	50,456	29,295	23,270	52,566
Manitoba	5,535	4,090	9,625	5,659	4,372	10,031
Saskatchewan	3,459	2,399	5,858	3,398	2,464	5,862
Alberta	7,332	4,420	11,752	7,351	4,983	12,335
British Columbia	12,607	6,592	19,199	12,514	7,085	19,599
Yukon	438	457	895	435	464	899
Northwest Territories	836	666	1,502	877	737	1,614
Outside Canada	1,323	405	1,728	1,313	390	1,703
<b>Total</b>	<b>129,498</b>	<b>78,793</b>	<b>208,299</b>	<b>130,835</b>	<b>84,801</b>	<b>215,636</b>
	1982			1983		
	Men	Women	Total <sup>1</sup>	Men	Women	Total
Newfoundland	3,997	1,373	5,370	3,980	1,413	5,393
Prince Edward Island	1,108	530	1,638	1,156	604	1,760
Nova Scotia	10,391	3,631	14,023	10,322	3,802	14,124
New Brunswick	4,782	2,668	7,450	4,716	2,725	7,441
Quebec <sup>2</sup>	19,915	11,551	31,466	19,891	11,886	31,777
National capital region (Quebec)	8,791	8,231	17,022	8,807	8,346	17,153
Ontario <sup>2</sup>	21,311	15,348	36,660	20,988	15,167	36,155

**19.10 Federal government employees by province or territory and sex, 1980-83 (concluded)**

Province or territory	1982			1983		
	Men	Women	Total <sup>1</sup>	Men	Women	Total
National capital region (Ontario)	30,216	24,804	55,020	30,165	24,832	54,997
Manitoba	5,712	4,626	10,338	5,508	4,226	9,734
Saskatchewan	3,380	2,608	5,988	3,333	2,579	5,912
Alberta	7,625	5,396	13,021	7,661	5,367	13,028
British Columbia	12,797	7,603	20,400	12,724	7,676	20,400
Yukon	448	495	943	447	508	955
Northwest Territories	842	666	1,508	832	674	1,506
Outside Canada	1,343	392	1,735	1,328	381	1,709
<b>Total</b>	<b>132,658</b>	<b>89,922</b>	<b>222,582</b>	<b>131,858</b>	<b>90,186</b>	<b>222,044</b>

<sup>1</sup>Includes eight employees in 1980, seven in 1981 and two in 1982 whose sex was not specified on pay documents.

<sup>2</sup>Excludes national capital region employees.

**Sources**

19.1 Table Research Branch, House of Commons.

19.2 Clerk of the Senate.

19.3 House of Commons Division, Department of Supply and Services.

19.4 - 19.6 Operations Branch, Office of the Chief Electoral Officer.

19.7 Advisory and Research Services Division, Public Law Branch,  
Department of Justice; Surveys and Mapping Branch, Department of Energy,  
Mines and Resources.

19.8 Public Institutions Division, Statistics Canada.

19.9 - 19.10 Public Affairs Directorate, Public Service Commission.



CHAPTER 20

---

# JUDICIAL SYSTEM



## OVERVIEW

---

The rule of law is a cornerstone of the democratic system. In Canada, civil law is used to settle private disputes between individuals and other private parties. Criminal law deals with crimes and their punishment.

In a civil case, basically, a court determines the relative rights of two opposing parties. In a criminal case a court is asked to decide the guilt or innocence of a person charged with an offence.

Prosecutions may be carried out by the police or by lawyers, depending on the practice of the attorney general responsible. Lawyers represent persons appearing before the courts in both civil and criminal proceedings.

Offenders sentenced to custody for two years or more are sent to federal institutions. Provincial governments have authority over persons given less than a two-year sentence or placed under court orders.

In recent years, criminal justice agencies have taken initiatives to compensate the victims of crime.

## CHAPTER 20

---

# JUDICIAL SYSTEM

<b>20.1</b>	<b>Legal system</b>	<b>641</b>
20.1.1	Common law and le droit civil	641
20.1.2	Civil (non-criminal) law	641
20.1.3	Human rights	641
20.1.4	Criminal law	642
20.1.5	Law Reform Commission of Canada	643
<b>20.2</b>	<b>Courts and the judiciary</b>	<b>643</b>
20.2.1	Administration of courts	643
20.2.2	Administration of criminal prosecutions	643
20.2.3	Federal judiciary	644
20.2.4	Provincial judiciary	646
20.2.5	Territorial judiciary	646
20.2.6	Canadian Judicial Council	647
20.2.7	Office of the Commissioner for Federal Judicial Affairs	647
<b>20.3</b>	<b>Legal services</b>	<b>647</b>
20.3.1	The legal profession	647
20.3.2	Department of Justice	647
20.3.3	Legal aid	648
<b>20.4</b>	<b>Law enforcement</b>	<b>649</b>
20.4.1	Crime	649
20.4.2	Homicide	649
20.4.3	Police forces	649
<b>20.5</b>	<b>Adult criminal court adjudications</b>	<b>651</b>
<b>20.6</b>	<b>Juvenile courts — charges of delinquency</b>	<b>651</b>
<b>20.7</b>	<b>Correctional services</b>	<b>652</b>
20.7.1	Custodial services	652
20.7.2	Non-custodial services	654
20.7.3	Correctional expenditures, facilities and personnel	654
20.7.4	Offender caseload	654
20.7.5	Caseload characteristics	654
<b>20.8</b>	<b>Victims of crime</b>	<b>655</b>
20.8.1	Criminal injuries compensation	655
<b>20.9</b>	<b>Canadian Centre for Justice Statistics</b>	<b>655</b>
20.9.1	Statistics and information programs	655
20.9.2	Technical assistance program	656

## TABLES

20.1	Court operations	657
20.2	Criminal prosecutions	657
20.3	Crime statistics	658
20.4	Traffic offences	658
20.5	Homicide victims	658
20.6	Police personnel	659
20.7-20.9	Changes in juvenile courts	660
20.10-20.12	Correctional services and caseloads	662
20.13	Criminal injuries compensation	663

## CHARTS

Chart 20.1	Overview of the courts of Canada	645
Chart 20.2	Sentenced admissions to provincial custody	650
Chart 20.3	Warrant of committal admissions to federal custody	653

## CHAPTER 20

# JUDICIAL SYSTEM

### 20.1 Legal system

#### 20.1.1 Common law and le droit civil

Common law as opposed to le droit civil contrasts two of the world's basic legal systems. Common law originated in England and is in force today in most Commonwealth countries, in the United States, and in the private law of nine Canadian provinces. Le droit civil originated in ancient Rome and prevails today in many Western European countries and in the private law of Quebec. In Canada, Quebec is a droit civil province in its private law only, whereas the other provinces are wholly common law.

Common law began its development in feudal England after the Norman conquest in 1066. It is a system of rules based on statutes and on precedents of previous court decisions. Thus the common law is made up of judicial decisions, and customary practices applied over the years to actual cases and situations.

Two cases are seldom exactly alike. Thus the court frequently needs to modify an earlier common law principle to reflect any new differences. In this way the law is able to grow and change with the times. Perhaps the most important way the law may be changed occurs when Parliament or a provincial legislature enacts a statute which overrides the common law dealing with the same point.

Le droit civil has its roots in the legal codes prepared centuries ago for the Roman Emperor Justinian and later for the Emperor Napoleon. The codification ordered by Napoleon became the model for the Civil Code of Quebec enacted in 1866.

Briefly, a civil code consists of relatively simple but comprehensive statements of rules which embody general principles of law. In theory, when a court is considering a case it does not consult the decisions of earlier courts as in a common law situation. Rather, it looks for the specific rule as found in an article of the civil code.

To contrast these two methods, consider this: the common law of negligence (carelessness causing injury to another) is embedded in several thousands of court decisions taking up many thousands of pages in the law reports. The civil law of negligence of Quebec, on the other hand, can be found in just three brief articles of the civil code, beginning with this

basic rule: "Every person capable of discerning right from wrong is responsible for the damage caused by his fault . . ." (Article 1053).

As would be expected, the reality is considerably different from the theory. The common law of negligence is relatively simple and understandable. A lawyer in a common law province would not normally have to do much research to find the rule that the courts would probably apply to some specific accident case. Nor is the rule in Article 1053 of the Quebec Civil Code as simple as might at first appear. What, for example, does 'fault' mean? In reality, the Quebec courts, which use the civil code, do resort to prior decisions and to the works of respected legal authors to help them determine the meaning of the code rules so that they may apply them to the cases they decide.

Thus decisions of similar cases turn out to be remarkably alike under both common law and civil law. Only the method by which the decision is reached is different.

#### 20.1.2 Civil (non-criminal) law

Civil or non-criminal law is used to settle private disputes between individuals and other private parties. Civil cases (called civil suits) arise because two parties differ on some matter involving financial transactions, property, contracts, a private injury (called a tort) or civil rights.

Civil law in Canada is based on common law except in Quebec where it is governed by the civil code. Authority to pass legislation on civil law matters is divided between Parliament and the provincial and territorial legislatures. Legislatures of the provinces and territories have jurisdiction over contracts, torts and property laws. Both levels of government have power to make laws to regulate the activities of corporations as well as tax laws. Bankruptcy and insolvency, patents and copyrights, and banks and banking laws fall under the jurisdiction of Parliament.

#### 20.1.3 Human rights

In December 1981, a resolution on the constitution was adopted by Parliament. The Parliament of Britain ratified the request in 1982 and it was

proclaimed in Canada as the Constitution Act, 1982, as Schedule II of the Canada Act. This act includes the Canadian Charter of Rights and Freedoms, establishing for all Canadians protection of basic rights and freedoms essential to maintaining a free and democratic society and a united country. The explanation of the charter states that this charter applies to all governments, federal, provincial and territorial, and will provide protection of the following:

**Fundamental freedoms** which include freedom of conscience and religion, freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication, freedom of peaceful assembly, and freedom of association;

**Democratic rights** giving Canadians the right to vote in all elections and to seek a seat in the House of Commons or in a legislative assembly;

**Mobility rights** which include the right to enter, remain in and leave Canada and the right to live and seek employment anywhere in Canada;

**Legal rights** explained as the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice;

**Equality rights for all individuals**, allowing no discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability;

**Official languages of Canada**, being English and French, giving them equality of status and equal rights and privileges as to their use in all institutions of the Parliament and Government of Canada;

**Minority language education rights** which set out the rights of Canadians regarding the allowance of an education in either the English or French language; and

**Native people's rights** are protected in that the guarantee of certain rights and freedoms shall not be construed so as to abrogate and derogate from any aboriginal treaty or other rights or freedoms that pertain to the aboriginal peoples of Canada.

As well, the charter is designed to protect minorities in that it must be interpreted in a way that will preserve and enhance the multicultural heritage of Canadians.

The Charter of Rights entrenches in the Canadian constitution the same concepts that were passed in the Canadian Bill of Rights (RSC 1970, Appendix III) enacted in 1960. It also overlaps with the Canadian Human Rights Act passed in 1977, which set out specific rights, and established the Canadian Human Rights Commission and a privacy commissioner to administer the rights and obligations included in the act.

To control abuse of rights and freedoms, and to protect the rights of everyone in Canada, Section 1 of

the charter states that the Canadian Charter of Rights and Freedoms guarantees the rights and freedoms set out in it subject only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society. In this way, rights are not absolute, but qualified.

#### 20.1.4 Criminal law

Criminal law deals with crimes and their punishment. A crime may be described as an act against society, as distinct from a dispute between individuals. It has been defined as any act done in violation of duties an individual owes to the community, for which act the law has provided that the offender shall be punished.

The criminal law system in Canada has its basis in the Constitution Act, 1867 (the former BNA Act). Section 91 provides that exclusive legislative authority of Parliament extends to the criminal law, except the constitution of courts of criminal jurisdiction but including the procedure in criminal matters. By Section 92, provincial legislatures may make laws in relation to the administration of justice in the province, including the constitution, maintenance, and organization of provincial courts, and may impose punishment by fine, penalty, or imprisonment to enforce any law of the province.

At the time of Confederation each of the colonies had its own body of statutes relating to criminal law. In 1869, in an attempt to assimilate them into a uniform system applicable throughout Canada, Parliament passed a series of acts, some dealing with specific offences and others with procedure. Most notable of the latter was the Criminal Procedure Act, but other acts provided for the speedy trial or summary trial of indictable offences, the powers and jurisdiction of justices of the peace in summary conviction matters and otherwise, and the procedure in respect of juvenile offenders.

Codification of the criminal law through a criminal code bill founded on the English draft code of 1878, Stephen's *Digest of criminal law*, Burbidge's *Digest of the Canadian criminal law*, and the relevant Canadian statutes, was brought about by the justice minister, Sir John Thompson, in 1892. This bill became the Criminal Code of Canada and came into force in July 1893.

The criminal code has been revised and amended frequently. In its present form it defines offences in the following general categories: offences against public order; firearms and other offensive weapons; offences against the administration of law and justice; sexual offences, public morals and disorderly conduct; invasion of privacy; disorderly houses, gaming and betting; offences against the person and reputation; offences against rights of property; fraudulent transactions; wilful and forbidden acts in respect of certain property; and offences relating to currency. The code also defines procedure to be

followed in the prosecution of both indictable and summary conviction offences.

Recent amendments in the area of sexual assault, the patriation of the constitution with the enhanced Charter of Rights and proposed changes in sentencing will have, as the courts build up a body of interpretation, a substantial impact on criminal law in Canada.

### 20.1.5 Law Reform Commission of Canada

The commission was established by the Law Reform Commission Act, which came into force in June 1971, to study and to keep under review the federal laws of Canada with a view to making recommendations for their improvement, modernization and reform. Specifically included among the commission's statutory objects is innovation in the development of new approaches to and new concepts of the law, in keeping with and responsive to the changing needs of modern Canadian society and its individual members. The commission has a specific mandate to make reform recommendations which reflect the distinctive concepts and institutions of the common law and the civil law legal systems of Canada. This statutory objective also sets the commission upon the path of reconciliation of differences and discrepancies in the expression and application of the law arising out of differences in those concepts and institutions.

The commission is required by statute to submit, from time to time, for the approval of the minister of justice, specific programs of study of particular laws or branches of law. It must include in such programs any study requested by the minister to which, in his opinion, it is desirable in the public interest that special priority be accorded. The commission is then empowered by statute to initiate and carry out any studies and research of a legal nature as it deems necessary for the proper discharge of its functions, including studies and research relating to the laws, legal systems and institutions of other jurisdictions, whether in Canada or abroad.

The commission's program of activities has four major segments: substantive criminal law, criminal procedure, protection of life and administrative law. In addition, the commission prepares discrete reports on small but significant anomalies found in statutes.

## 20.2 Courts and the judiciary

### 20.2.1 Administration of courts

Responsibility for administration of courts is divided between federal and provincial levels of government by the revised constitution, which retains the applicable provisions of the British North America Act.

Section 92(14) gives each province exclusive powers over the administration of justice in that province. Under this authority provincial legislatures have established courts of appeal, supreme courts,

county courts and provincial courts. The governments of Quebec and Nova Scotia have delegated some authority to their municipalities; hence these two provinces have municipal courts.

Section 101 allows Parliament to provide for the constitution, maintenance and organization of a general court of appeal for Canada, and for the establishment of any additional courts for the better administration of the laws of Canada. Under this authority the Supreme Court of Canada, the Federal Court of Canada, and the Court Martial Appeal Court of Canada, have been established (Chart 20.1).

Section 96 provides that the Governor General shall appoint the judges of superior, district, and county courts in each province, except those of the courts of probate in Nova Scotia and New Brunswick. Section 100 carries this one step further: the salaries, allowances and pensions of these judges are to be fixed and provided by Parliament.

Provincially-constituted courts in each province can be divided into two groups: those whose judges are appointed and paid by the federal government, and those whose judges are appointed and paid by the province.

An appellate court is the superior court or the superior court division whose primary function is to review the decisions of other courts. In a civil case, basically, the courts try to determine the relative rights of two opposing parties. In a criminal case a court is asked to decide the guilt or innocence of a person charged with an offence.

Expenditures on court operations are divided among the various levels of government. The federal government bears the costs of the Supreme Court and the Federal Court of Canada. It also appoints and pays the salaries of provincial and territorial superior court judges. The provinces are responsible for all other expenses.

A breakdown of court operation expenditures by level of government in 1981-82 shows that provincial and territorial governments contributed \$326.8 million or 84.4% of the total, and the federal government provided the remaining \$60.4 million or 15.6%.

Expenditures varied by jurisdiction. For example, the lowest costs were recorded in Yukon (\$1.2 million) and Prince Edward Island (\$1.3 million), but Ontario had the highest (\$128.8 million) for 1981-82 (Table 20.1). Person-year expenditures among the jurisdictions ranged from a low of 25 in Yukon to a high of 4,168 in Quebec.

The national per capita cost in 1981-82 was \$17.52. Again, the figures varied by jurisdiction, ranging from about \$10 in Newfoundland and Prince Edward Island to about \$50 in Yukon and in Northwest Territories.

### 20.2.2 Administration of criminal prosecutions

Responsibility for the prosecution of criminal cases is also divided between the federal and provincial

governments. The primary basis for the division is found in Section 2 of the criminal code. The attorney general of a province is given responsibility for proceedings under the criminal code. The attorney general of Canada is given responsibility for criminal proceedings in Northwest Territories and Yukon, and for proceedings under federal statutes other than the criminal code. Provincial statute and municipal bylaw prosecutions are the responsibility of the provincial attorney general.

Prosecutions may be carried out by the police or by lawyers, depending on the practice of the attorney general responsible. If he prosecutes using lawyers, the attorney general may rely on full-time staff lawyers, or he may engage the services of a private practitioner for individual cases.

A breakdown of criminal prosecution expenditures by level of government in 1981-82 shows that 75% was paid by the provinces (excluding Alberta), 24% by the federal government and 1% by the territories.

Quebec, Ontario and British Columbia accounted for 79.7% of provincial/territorial criminal prosecution expenditures on a dollar basis and 78.6% on a person-year basis. A comparable proportion (an estimated 80.6%) of the national population (Alberta excluded) lives in these provinces.

Nationally (federal prosecutions included), the per capita cost of criminal prosecutions in 1981-82 was \$3.56. Per capita expenditures on provincial and territorial prosecution systems ranged from \$1.49 in Newfoundland to \$5.37 in British Columbia, \$12.73 in Yukon and \$14.86 in Northwest Territories (Table 20.2).

### 20.2.3 Federal judiciary

**The Supreme Court of Canada** was created in 1875 by an act of Parliament, eight years after Confederation. Despite its creation, cases brought before it could still be further appealed to the judicial committee of the Privy Council in England. Appeals to this committee were abolished in criminal cases in 1933 and in all other cases in 1949, when the Supreme Court Act was amended to establish firmly the court's judicial independence as Canada's ultimate court of appeal.

The court was first composed of a chief justice and five puisne or associate judges. In 1927 the number of judges was increased to seven and in 1949, with the abolition of appeals to the judicial committee of the Privy Council, to nine, the current number. Of these, at least three are to be appointed from Quebec.

The Supreme Court is a general court of appeal for both criminal and civil cases. Its jurisdiction embraces the civil law of Quebec as well as the common law of the nine common law provinces. In most cases, appeals are heard by the court only if permission to appeal is first given. The court will grant such leave if it is of the opinion that a question of public importance is involved, or if there is an

important issue of law that ought to be decided by the court. Leave to appeal may also be given by a provincial appellate court when one of its judgments is sought to be questioned in the Supreme Court of Canada.

The court will review cases coming from the 10 provincial courts of appeal and from the appeal division of the Federal Court of Canada. The court is also required to consider and advise on questions referred to it by the Governor-in-Council. It may also advise the Senate or the House of Commons on private bills referred to the court under any rules or orders of the Senate or of the House of Commons.

The Supreme Court sits only in Ottawa and its sessions are open to the public. A quorum consists of five members, but the full court of nine sits in most cases; however, in a few cases, five are assigned to sit, and sometimes seven, when a member is ill or disqualifies himself. Since most of the cases have been screened through successful applications for leave to appeal, they involve, by and large, important questions of general concern that ought to be heard by the full court of nine. The main categories include constitutional, criminal and administrative law cases. Some cases may raise points of particular concern which do not need the attention of the full court. Unless by special leave of the court, the only persons who may appear before the court to argue, apart from litigants themselves, are lawyers from any Canadian province. The judgment of the Supreme Court of Canada in all cases is final and conclusive.

**Chief Justice and judges of the Supreme Court of Canada, as at May 30, 1984:**

Chief Justice of Canada, Rt. Hon. Mr. Justice Brian Dickson, PC (appointed April 18, 1984; first appointed a judge of the Supreme Court March 28, 1973)

Hon. Mr. Justice Roland Almon Ritchie (appointed May 5, 1959)

Hon. Mr. Justice Joseph Philemon Jean Marie Beetz (appointed January 22, 1974)

Hon. Mr. Justice Willard Zebedee Estey (appointed September 29, 1977)

Hon. Mr. Justice William Rogers McIntyre (appointed January 1, 1979)

Hon. Mr. Justice Julien Chouinard (appointed September 24, 1979)

Hon. Mr. Justice Antonio Lamer (appointed March 28, 1980)

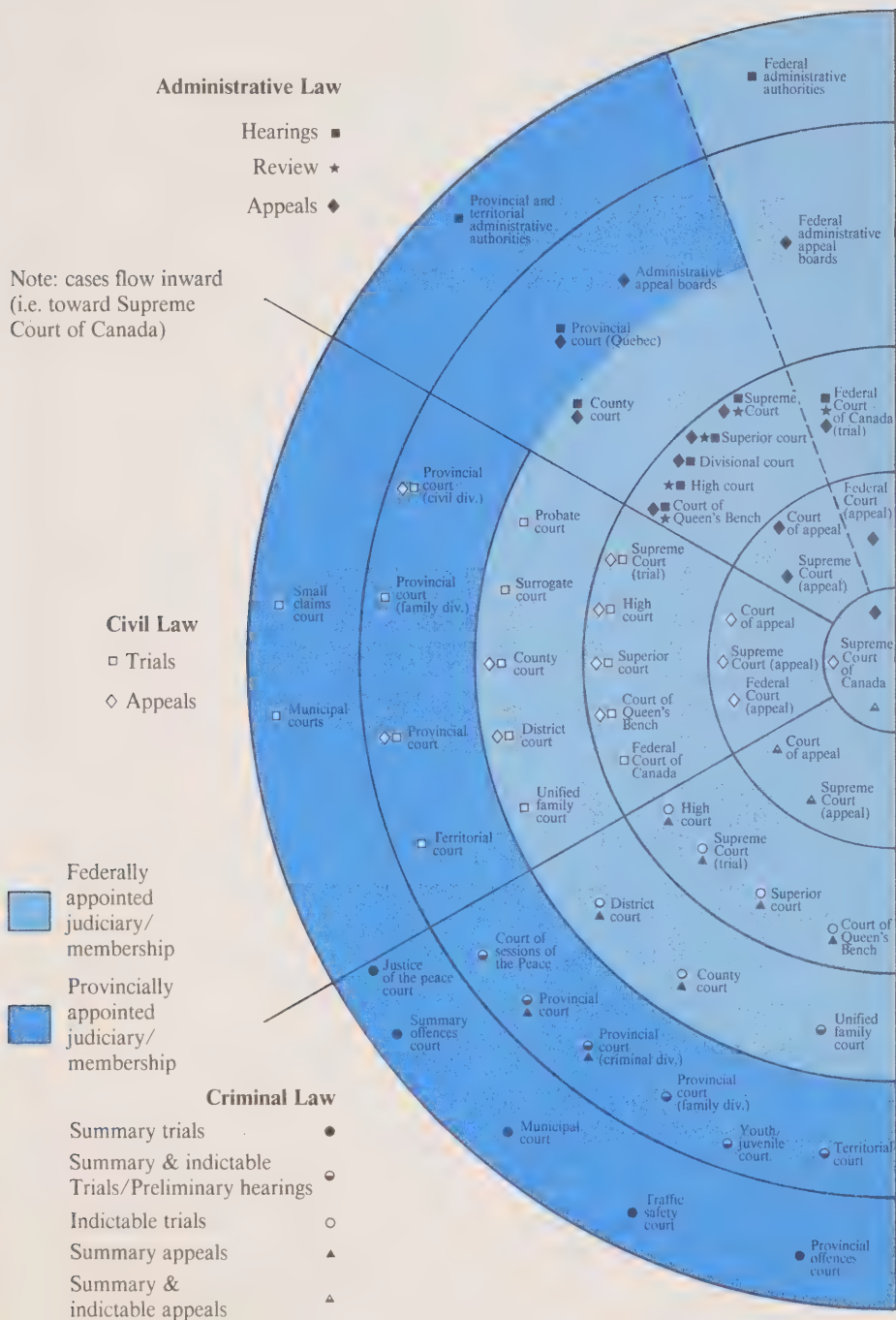
Hon. Madam Justice Bertha Wilson (appointed March 4, 1982)

Hon. Mr. Justice Gerald Eric Willoughby Le Dain (appointed May 29, 1984).

**The Federal Court of Canada** came into existence in June 1971. It was constituted by an act of Parliament under Section 101 of the British North America Act (Constitution Act, 1867) which, after authorizing the creation of the Supreme Court of Canada, confers on Parliament the authority to constitute other courts for the better administration

## Overview of the courts of Canada: Hierarchy, procedural flow and jurisdiction

### Flow of cases



of the laws of Canada. According to the Federal Court Act (RSC 1970, c.10), the court was established as a court of law, equity and admiralty, and it is a superior court of record having both civil and criminal jurisdiction. The Federal Court replaced the Exchequer Court of Canada which had been in operation since 1875.

The court has two divisions, an appeal division and a trial division. The court of appeal consists of the chief justice and nine other judges. The trial division consists of the associate chief justice and 11 other judges. Every judge is an ex officio member of the division of which he is not a regular member.

While all judges must live in or near the national capital region, each division of the court can sit any place in Canada. The place and time of the sittings must be arranged to suit the convenience of the litigants. There is authority in the statute for a rotation of judges to provide for continuity of judicial availability in any place where the volume of work, or other circumstances, makes such an arrangement expedient.

**Chief Justice and judges of the Federal Court of Canada, as of June 29, 1984:**

Chief Justice, Hon. Mr. Justice Arthur Louis Thurlow (appointed to appeal division June 1, 1971; appointed associate chief justice December 4, 1975; appointed chief justice January 4, 1980)  
Associate Chief Justice, Hon. Mr. Justice James Alexander Jerome (appointed February 18, 1980).

#### **Federal Court of Appeal:**

Hon. Mr. Justice Darrel Verner Heald (appointed to trial division July 9, 1971; appointed to appeal division, December 4, 1975)  
Hon. Mr. Justice James Knatchbull Hugessen (appointed July 18, 1983)  
Hon. Mr. Justice Patrick Morgan Mahoney, PC (appointed to trial division September 13, 1973; appointed to appeal division July 18, 1983)  
Hon. Mr. Justice Joseph Augustine Louis Marceau (appointed to trial division December 23, 1975; appointed to appeal division July 18, 1983)  
Hon. Mr. Justice Louis Pratte (appointed to trial division June 10, 1971; appointed to appeal division January 25, 1973)  
Hon. Mr. Justice William F. Ryan (appointed April 11, 1974)  
Hon. Mr. Justice Arthur Joseph Stone (appointed July 18, 1983)  
Hon. Mr. Justice John J. Urie (appointed April 19, 1973)  
Hon. Mr. Justice Mark MacGuigan (appointed June 29, 1984).

#### **Federal Court Trial Division**

Hon. Mr. Justice Angus Alexander Cattanach (appointed to Exchequer Court March 22, 1962; appointed June 1, 1971)  
Hon. Mr. Justice Frank U. Collier (appointed September 16, 1971)

Hon. Mr. Justice Jean-Eudes Dubé, PC (appointed April 9, 1975)  
Hon. Mr. Justice John C. McNair (appointed July 18, 1983)  
Hon. Mr. Justice Francis C. Muldoon (appointed July 18, 1983)  
Hon. Madam Justice Barbara Joan Reed (appointed November 17, 1983)  
Hon. Mr. Justice Paul Rouleau (appointed August 5, 1982)  
Hon. Mr. Justice Barry Louis Strayer (appointed July 18, 1983)  
Hon. Mr. Justice Allison Arthur Mariotti Walsh (appointed to the Exchequer Court, July 1, 1964; appointed June 1, 1971, became a supernumerary judge as of June 1, 1984)  
Hon. Mr. Justice George A. Addy (appointed September 17, 1973; became a supernumerary judge as of September 1, 1983)  
Hon. Mr. Justice Pierre Denault (appointed June 29, 1984)  
Hon. Mr. Justice L. Marcel Joyal (appointed June 29, 1984)  
Hon. Mr. Justice Yvon Pinard (appointed June 29, 1984).

#### **20.2.4 Provincial judiciary**

Certain provisions of the constitution govern to some extent the provincial judiciary. Under Section 92(14) the legislature of each province exclusively may make laws in relation to the administration of justice in the province including the constitution, maintenance and organization of provincial courts of both civil and criminal jurisdiction. Section 96 provides that the Governor General shall appoint the judges of the superior, district and county courts in each province, except those of the courts of probate in Nova Scotia and New Brunswick.

#### **20.2.5 Territorial judiciary**

In 1971 amendments now cited as RSC 1970, c.48 (1st supplement) to the Yukon Act and the Northwest Territories Act were proclaimed in force, simultaneously with certain ordinances of Yukon and Northwest Territories, allowing the territorial governments to assume responsibility for the administration of justice other than the conduct of criminal prosecutions.

**Yukon** created a court of appeal, a supreme court and a territorial court through territorial legislation in 1971. The court of appeal, as established by the Court of Appeal Act (RSYT 1971, c. C-20) consists of the resident justice of Yukon, plus a resident justice of Northwest Territories, the chief justice of British Columbia and nine judges of the court of appeal of British Columbia. The court sits primarily in Vancouver, but also has sittings in Whitehorse. The supreme court, according to the Supreme Court Act (RSYT 1971, c. T-2) consists of the resident justice of Yukon, a resident justice of Northwest Territories, and when required, three judges from British

Columbia and Alberta. It sits primarily in Whitehorse. The territorial court, as enabled by the Territorial Court Act (RSYT 1971, c. M-1), has two full-time judges and a pool of deputy judges on call, all appointed by the territorial commissioner. There are also 45 justices of the peace serving in 13 widely scattered circuit locations.

**Northwest Territories** has a court system consisting of a court of appeal, a supreme court and a territorial court. The court of appeal consists of the resident justice of Northwest Territories, the resident justice of Yukon, the chief justice of Alberta and 12 judges of the court of appeal of Alberta. It sits annually in Yellowknife and in Edmonton and Calgary, as required. The supreme court is presided over by two resident justices of Northwest Territories, the resident justice of Yukon, and when required, eight federally appointed judges from Alberta, plus three from Quebec and two from Ontario. It sits permanently in Yellowknife and goes on circuit to various locations as required. The territorial court consists of four territorially appointed judges; three sit permanently in Yellowknife and one in Hay River, as well as travelling on circuit. There are about 111 justices of the peace serving in various communities.

#### 20.2.6 Canadian Judicial Council

The Canadian Judicial Council, as established under amendments to the Judges Act, consists of the chief justice of Canada and the chief justices and associate chief justices of superior courts. The council's purpose is to promote efficiency and uniformity, and to improve the quality of judicial service in superior and county courts. It is assisted in these tasks by a county court committee composed of senior county court judges of the jurisdictions.

The council organizes conferences and educational seminars for federally appointed judges, acts as a focal point for discussion of issues of interest to the judiciary, and conducts investigations of allegations or complaints made in respect of a federally appointed judge.

#### 20.2.7 Office of the Commissioner for Federal Judicial Affairs

The Commissioner for Federal Judicial Affairs, under the minister of justice, is responsible for administrative matters pertaining to the Canadian Judicial Council and all federally appointed judges excluding those of the Supreme Court of Canada. Specific duties include the administration of judges' salaries, allowances and annuities as provided for in the Judges Act, the preparation of budgetary submissions for the requirements of the office and the Canadian Judicial Council, and such other tasks associated with the proper functioning of the judicial system as may be assigned by the minister of justice. The position was established in 1978 under amendments to the Judges Act.

## 20.3 Legal services

### 20.3.1 The legal profession

Lawyers are part of the machinery of justice and are considered officers of the court. They represent parties appearing before the courts in both civil actions and criminal proceedings, and in these situations are often referred to as counsel. The initials QC after a lawyer's name mean Queen's Counsel, a title given by the government to lawyers in recognition of experience and competence.

Lawyers also assist and advise individuals, organizations and institutions (including governments) in all activities having a legal element. A lawyer appearing for a client in court is acting as a barrister and one engaged in other activities as a solicitor. These are English terms carried over from the way the legal profession developed and is still organized in England, where there is a clear division between the two. Every Canadian lawyer, however, is both a barrister and a solicitor, although some lawyers specialize in court or barrister work. Others, by far the greater number, devote themselves to the solicitor or office work of assisting and advising.

In Quebec the profession is divided between advocates (lawyers) and notaries. The advocate acts both as a barrister and solicitor. He may plead in court and also provide legal advice to his client. The notary may appear in court only on non-contentious matters such as adoption proceedings. He has the power to prepare certain documents, such as wills, deeds of sale of real property, and marriage contracts.

In all provinces, lawyers are organized in provincial law societies which control admission to the profession and discipline their members to maintain high standards. Before being admitted to practice, a potential lawyer must complete rigorous and lengthy education and training. This differs in detail from province to province but usually includes two years of university, three years of law school, up to a year of apprenticeship called articling or clerkship under the supervision of a practicing lawyer, and some special practice courses supervised by the law society.

### 20.3.2 Department of Justice

**Criminal prosecutions.** The department of justice has regional offices at Halifax, Montréal, Toronto, Winnipeg, Saskatoon, Edmonton, Vancouver and Yellowknife. A Crown attorney's office is in Whitehorse and an Ottawa office (criminal prosecutions section) is staffed with full-time prosecutors.

The Ottawa office is composed of a headquarters division, an anti-trust division, an Ottawa region division and a Hull region division. To supplement regular staff, standing agents and ad hoc agents are employed to prosecute under particular statutes within a specified municipality or other territorial division and to prosecute specific cases. Personnel from the Ottawa office and other regional offices

assist the prosecutors in Yukon and Northwest Territories.

Directors of regional offices oversee federal criminal litigation and provide prosecution services in their geographic areas.

In provinces with federal department of justice offices the Crown is represented in indictable appeals by regular staff prosecutors. Where there is no such office, the agent who appeared at trial will represent the Crown on appeal.

In appeals to the Supreme Court of Canada, a member of the Ottawa office staff or the member of the office who handled the appeal in the prior court will represent the attorney general of Canada.

### 20.3.3 Legal aid

Before its institutionalization in law and in federal-provincial cost-sharing schemes, legal aid was based on charity and differed from present-day services, not just in the amount of assistance but also in philosophy. Legal aid is now seen as a component of an effective judicial system rather than as a facet of social welfare.

All provinces and territories provide legal aid in criminal cases to eligible persons who might be imprisoned or lose their livelihood if convicted. Varying amounts of help are given for civil matters in all jurisdictions. Eligibility is established according to financial circumstances, the basic aim being to assist those who would be unable to retain counsel or would suffer serious hardship if they had to obtain legal services on their own.

**History.** Before the advent of organized legal aid, lawyers sometimes provided free legal services to people who could not pay. Or they charged reduced fees depending on a client's financial circumstances. An early arrangement for providing legal help was to appoint a lawyer when an indigent person was charged with a serious crime. The appointment may have been made by a judge or on a judge's request, depending on the jurisdiction. The provincial or territorial department concerned with justice usually looked after the cost, at least for more serious and time-consuming cases. But the government did not always pay the lawyer who was appointed.

In the development of legal aid plans, there were basically three different patterns. In Newfoundland, Nova Scotia, Quebec, Manitoba and British Columbia, the provincial law society first developed legal aid clinics. The efforts of the law societies led in due course to the development of government funded legal aid. In Ontario and Alberta the law society and the provincial government went through a developmental period which culminated in the current plans in both provinces now mostly funded by the government. In Prince Edward Island and New Brunswick, the provincial governments introduced the present legal aid plans. Saskatchewan introduced at first a judicare plan, based on an agreement between

the law society and the province and a few years later the present plan, which provides for legal services, as a rule, through salaried lawyers.

In Yukon and Northwest Territories, the federal department of justice administered a criminal legal aid plan for a number of years until 1971. At that time the administration of justice functions including the provision of legal aid were transferred to the territories.

**Agreements with the federal government.** The federal department of justice started cost sharing legal aid with respect to the criminal law in 1972. Quebec and British Columbia signed by December of that year, the four Atlantic provinces, Ontario, Manitoba and Alberta signed in 1973, and Saskatchewan in 1974.

Initially the federal share was the lesser of 50 cents per capita of provincial population or 90% of provincial expenditures for criminal legal aid. It was increased to the lesser of 75 cents or 90% for 1976-77, the lesser of 82 cents or 90% for 1977-78, and the lesser of 92 cents or 90% for 1978-79. The 1978-79 agreement continued in effect as the basis of cost sharing, subject to renegotiation and redefining of terms for a new agreement expected in 1984.

The federal and provincial government agreement is subject to a number of conditions including eligibility of persons charged with offences, choice of lawyers, appeals to higher courts by the Crown, and fee schedules.

Civil coverage of legal aid matters was initiated in July 1980 with federal amendments to the Canada Assistance Plan Act, 1966-67. Under the auspices of Health and Welfare Canada, the federal and provincial governments agreed to cost share civil legal aid on a 50/50 basis. These agreements allow for retroactive payments of civil legal aid expenditure, subject to provincial social assistance legislation.

Cost sharing with the territories extends to both criminal and civil matters. Agreements were signed with Northwest Territories in 1971 and 1979 and with Yukon in 1977. With the territories, the formula calls for a 50% federal contribution, with specified maximums.

**Duty counsel.** Most jurisdictions have a duty counsel system to advise detained persons and persons appearing in court without counsel, to guide them in obtaining legal services, and to provide on-the-spot representation if needed.

Duty counsel is provided through private practice lawyers in New Brunswick, Alberta and the two territories, which have judicare type legal aid. It is furnished mainly by staff lawyers in Quebec, but by both private practice and staff lawyers in all other provinces with duty counsel service: Newfoundland, Ontario, Manitoba and British Columbia. Ontario is different in that duty counsel service is provided by staff lawyers in Toronto but by private practice lawyers elsewhere.

Lawyers who provide duty counsel services may be located in magistrate's (provincial), family and juvenile courts. In Yukon and Northwest Territories, duty counsel lawyers travel with the court.

Nova Scotia, Prince Edward Island and Saskatchewan do not have duty counsel systems, but lawyers working for the legal aid plans advise or represent accused persons if necessary.

**Legal aid services.** Legal aid services may consist of providing advice, representing clients in court proceedings, representing clients in administrative matters, drawing up legal documents, and negotiating settlements. The extent of these services, especially in civil matters, differs by jurisdiction.

## 20.4 Law enforcement

### 20.4.1 Crime

Over the six-year period 1977-82, the number of offences increased 27.5% from 2,226,565 to 2,838,840. Part of the increase can be attributed to the growth of the Canadian population of 5.8% over the same period.

Criminal code offences, accounting for about three-quarters of all offences, grew by 33.2% between 1977 and 1982. They can be broken down into three categories: crimes of violence, property crimes and other criminal code offences. According to 1982 data, property crimes were about nine times as numerous as crimes of violence. Between 1977 and 1982 property crimes increased 38.4% and crimes of violence 24.2%.

Federal statute offences, which accounted for about 4% of total offences, declined by 14.3% between 1977 and 1982. Federal statute drug offences declined by 2% between 1977 and 1982 due to a dramatic decline between 1981 and 1982 (Table 20.3).

**Criminal code traffic statistics.** In 1982 there were 267,290 criminal code traffic offences. From 1977 to 1982, impaired driving offences consistently accounted for more than half of these traffic offences, while "failure to stop" offences accounted for between one-quarter and one-third. The remaining 10% to 20% of the offences over the six-year period were: criminal negligence causing death, criminal negligence causing bodily harm, criminal negligence in the operation of a motor vehicle, dangerous driving, failure or refusal to provide a breath sample, and driving while disqualified (Table 20.4). This last offence was found unconstitutional by the Supreme Court of Canada in February 1981. These criminal code traffic offences are in addition to provincial and territorial highway traffic legislation violations.

### 20.4.2 Homicide

Homicide is a term used to designate the criminal code offences of murder (prior to July 26, 1976, capital and non-capital murder), manslaughter and

infanticide. In the period 1977-82 inclusive, 3,914 Canadians were victims of homicide. This represents a yearly average of 652.3 deaths or an average annual rate of 2.7 homicide victims per 100,000 population. Total homicide offences reported in Canada from 1977 to 1980 declined from 711 to 593 but increased over the next two years from 648 to 670 (Table 20.5). As murders account for an average of 90% of all homicide offences in any year, the murder and total homicide patterns from 1977 to 1982 are similar. Volatile yearly fluctuations in manslaughter offences and rates over this period preclude the identification of any consistent trends. One manslaughter incident culminated in the death of 48 victims in 1980 and caused a dramatic rise in both the number of manslaughter offences and corresponding rate for that year.

### 20.4.3 Police forces

**Organization of police forces.** Police forces of Canada are organized in three groups:

- (1) federal, the Royal Canadian Mounted Police;
- (2) provincial — Ontario and Quebec have their own police forces; the RCMP performs parallel functions in all other provinces, including New Brunswick, where the New Brunswick Highway Patrol also operates; and
- (3) municipal police forces — most urban centres have their own police forces, or provincial police under contract, to attend to police matters.

In addition, the Canadian National Railways, the Canadian Pacific Railway Company and Ports Canada have their own police forces.

**The Royal Canadian Mounted Police (RCMP).** This is a civil force maintained by the federal government. It was established in 1873 as the North-West Mounted Police and was granted the prefix Royal by King Edward VII in 1904. Its sphere of operations was expanded in 1918 to include all of Canada west of Port Arthur and Fort William (now Thunder Bay). In 1920 it absorbed the Dominion Police, its headquarters was transferred from Regina to Ottawa and its title changed to Royal Canadian Mounted Police.

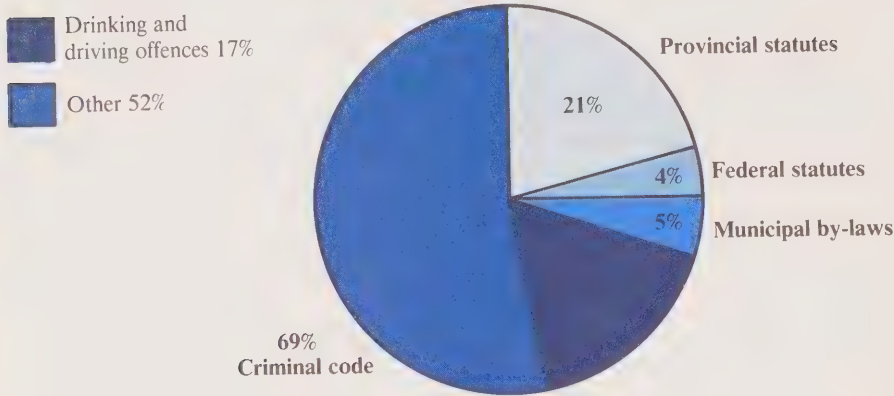
The force operates under authority of the Royal Canadian Mounted Police Act (RSC 1970, c. R-9). It is responsible to the solicitor general and is controlled and managed by a commissioner who holds the rank and status of a deputy minister and is empowered to appoint members to be peace officers in all provinces and territories.

Administration of justice in the provinces, including enforcement of the Criminal Code of Canada, is part of the power and duty delegated to the provincial governments. All provinces except Ontario and Quebec have contracts with the RCMP to enforce criminal and provincial laws, under direction of the respective attorneys general or solicitors general. In these eight provinces, the force

Chart 20.2

### Sentenced admissions to provincial custody <sup>(1)</sup> by major offence, 1982-83

Major offences: 131,291 admissions



(1) Includes offenders who are subsequently admitted to federal custody after a 30-day appeal period.

provides police services to 188 municipalities, assuming enforcement responsibility of municipal as well as criminal and provincial laws. Yukon and Northwest Territories are policed exclusively by the RCMP so criminal offences, federal statutes and all ordinances of the territories fall within RCMP responsibility. The force maintains liaison officers in London, Paris, Bonn, Rome, Hong Kong, Washington, Sydney, Vienna, Buenos Aires, Brussels, Santiago, Bogota, New Delhi, Abidjan, Tel Aviv, Kingston, Tokyo, Nairobi, Beirut, Mexico City, The Hague, Lima, Manila, Stockholm, Berne, Bangkok and Port of Spain, and represents Canada in the International Criminal Police Organization with headquarters in Paris.

The force has 13 operational divisions across Canada; they comprise two districts and 48 subdivisions which include 716 detachments. The headquarters division, as well as the office of the commissioner, is in Ottawa. Divisional headquarters, for the most part, are located in provincial or territorial capitals.

A national police information centre at RCMP headquarters is staffed and operated by the force. Law enforcement agencies throughout Canada have access via remote terminals to information on stolen vehicles, licences, wanted persons and stolen property.

The RCMP operates the Canadian Police College at which force members and selected representatives of other Canadian and foreign forces may study crime prevention and detection.

As of December 31, 1983 the force had a total authorized strength of 19,577 including regular members, special constables, civilian members and public service employees.

**Ontario Provincial Police**, a Crown force, is the third largest deployed force in North America, with an authorized strength of 5,315 (1983) uniformed and civilian personnel.

The force operates under the ministry of the solicitor general for Ontario and is administered by a commissioner from general headquarters at Toronto. Operational and administrative responsibility is maintained by three deputy commissioners in the areas of field, investigations and administration. At the next level, chief superintendents administer seven divisions: field operations, field support, investigation, investigation support, personnel management, supply and planning and technology.

The mandate of the force is set out under the Ontario Police Act (RSO 1980). The Ontario Provincial Police Force enforces federal and provincial statutes in areas not required to maintain their own police departments, maintains a traffic

patrol on more than 22 000 km of highways and 993 000km<sup>2</sup> of rural area, enforces the Liquor Licence Act for Ontario and maintains a criminal investigation branch and other branches to assist other forces to investigate major crimes.

The force has 187 detachments and 16 policing districts, each commanded by a superintendent. Contract policing services are provided to 10 municipalities. To police Indian reserves in Ontario, the force has 120 Indian reserve special constables (1983) employed on 58 Indian reserves.

**Quebec Police Force.** Under the authority of the attorney general, the Quebec Police Force is responsible for maintaining peace, order and public safety throughout the province, and for prevention and investigation of criminal offences and violations of provincial law. The force is under the command of a director general assisted by five assistant directors general and a director of personnel and communications.

For police purposes, the province is divided into nine districts, each under the command of a chief inspector or an inspector, and named as follows: Bas St-Laurent, Saguenay-Lac St-Jean, Québec, Mauricie, Estrie, Montréal, Outaouais, Nord-Ouest and Côte-Nord. Strength of the force at the end of December 1983 was 4,450 members and 941 civilian employees.

**Municipal police forces.** Provincial legislation makes it mandatory for cities and towns to furnish adequate municipal policing for the maintenance of law and order in their communities. Also, all villages and townships or parts of townships having a population density and a real property assessment sufficient to warrant maintenance of a police force, and having been so designated by order-in-council, are responsible for policing their municipalities.

**Police personnel.** After a slight decline in 1978-79, the period from the end of 1979 to the end of 1981 saw a slight overall increase in the number of police personnel in Canada, both in absolute and per capita figures. The national number of police officers at the end of 1983 was 53,413, down from 53,725 in 1982 and the total number of full-time personnel was down to 67,818 from 68,589 in 1982. The decrease in officers was the second observed since 1962; the first was in 1982. The ratio of police officers per 1,000 population also decreased during 1983, from 2.2 to 2.1.

Police personnel in 1983 included, besides police officers, 14,405 other full-time personnel (comprising cadets, bylaw enforcement officers and civilian personnel). Municipal forces accounted for 36,421 personnel, while the RCMP accounted for 19,577. The remaining 11,820 personnel were employed by the OPP, the QPF, the New Brunswick Highway Patrol, the Canadian National and Canadian Pacific Railway Police, and the Ports Canada Police (Table 20.6). The 1983 national ratio of

full-time police officers per 1,000 population was 2.1, while provincial ratios ranged from 1.5 in Prince Edward Island to 5.5 in Yukon.

## 20.5 Adult criminal court adjudications

Offences may be classified in three groups: indictable offences, summary conviction offences and dual procedure offences which allow the prosecutor to choose whether the prosecution will be by summary conviction or indictment. Indictable offences are grouped in two main categories: offences that violate the criminal code and offences against federal statute. Offences punishable on summary conviction — those not expressly made indictable — include offences against the criminal code, federal statutes, provincial statutes and municipal bylaws. Many summary conviction offences amount to mere disturbances of the peace, minor upsets to public safety, health and comfort such as parking violations, intoxication and practising trades without a licence. Nevertheless, summary conviction offences may include more serious charges such as assault.

There are two important differences between summary conviction and indictable offences. First, indictable offences are tried by a more complex and formal procedure than are summary conviction offences. Second, the maximum penalty which can be imposed in a summary conviction is a \$500 fine or six months imprisonment, or both. The criminal code provides that a magistrate's or provincial court has exclusive jurisdiction over summary conviction offences and certain named indictable offences. Other indictable offences require the accused person to elect whether he wishes to be tried by the magistrate or provincial court judge alone, a higher judge alone or a higher judge sitting with a jury.

More serious offences such as murder, rape or treason are the exclusive jurisdiction of a superior court and must be tried in a superior court usually with a jury.

## 20.6 Juvenile courts — charges of delinquency

The term juvenile delinquent, as defined in the Juvenile Delinquents Act, was any child who violated any provision of the criminal code or of any federal or provincial statute, or of any bylaw or ordinance of any municipality, or who was guilty of sexual immorality or any similar form of vice, or who was liable by reason of any other act to be committed to an industrial school or juvenile reformatory under the provision of any federal or provincial statute. The commission by a child of any of these acts was an offence referred to as a delinquency.

The Juvenile Delinquents Act was never operative in Newfoundland, where a provincial statute, the Welfare of Children Act, provided for the

establishment of juvenile courts since 1944. Juvenile courts in Newfoundland could not try a child charged with murder or manslaughter.

The ages of children within the jurisdiction of the juvenile courts have varied across the provinces. The Juvenile Delinquents Act defined a child as, any boy or girl apparently or actually under 16 years or such other age as might be directed in any province. In Quebec and Manitoba, the age limit was under 18 years, while in British Columbia it was under 17 years. Under the Welfare of Children Act in Newfoundland, the maximum age was under 17 years. In all the other provinces and territories the upper age limit was under 16 years.

In Quebec the Youth Protection Act, in force since 1979, has required that all juveniles accused of committing offences be referred to the director of youth protection. Juveniles under 14 years are not usually charged.

Tables 20.7–20.9 cover the years 1977 to 1982, based on data collected about persons charged under the Juvenile Delinquents Act. The first two are based on the number of charges adjudicated, the third shows the number of individuals involved in juvenile court proceedings.

**Young Offenders Act.** In July 1982, the House of Commons passed the Young Offenders Act (SC 1980-81-82, c.110) which was proclaimed in April 1984 and which repealed the Juvenile Delinquents Act. The broadly defined offence of delinquency has been abolished. Only young persons charged with offences defined in the criminal code and other federal statutes and regulations are dealt with under the Young Offenders Act. The act defines a young person as 12 years of age or more, but under 18 years. However, the uniform maximum age would not apply in all provinces until April 1, 1985.

The Young Offenders Act declares that young persons should bear responsibility for their illegal actions, yet their special needs as children in a state of dependency are recognized. They are accorded rights and freedoms in their own right. These rights and freedoms include those stated in the Canadian Charter of Rights and Freedoms or in the Canadian Bill of Rights. In particular, the act states that young persons have the right to be heard in the course of, and to participate in, the processes that lead to decisions that affect them, and that they should have special guarantees of their rights and freedoms.

## 20.7 Correctional services

Responsibility for the provision of adult correctional services is shared among all federal, provincial, and in the case of Nova Scotia, municipal governments. As set out in the Criminal Code of Canada, the federal government is responsible for offenders sentenced to custody for two years or more, while provincial governments have authority over persons

given less than a two-year custodial sentence, or placed under other court orders.

Although there is a clear delineation in division of responsibility, provision is made for interchange among jurisdictions in exchange-of-service agreements. These are negotiated for such purposes as: transferring inmates across jurisdictions; accommodating parole suspensions; and providing for the efficient delivery of parole supervision, community assessment services, and health, psychiatric and educational services.

The federal Prisons and Reformatory Act defines the general administrative structures and responsibilities for operating custodial facilities. Each province or territory, although bound by general guidelines, has instituted its own set of legislative and regulatory guidelines for corrections.

The following government agencies are responsible for adult corrections in Canada:

**Federally.** Ministry of the Solicitor General; Correctional Service of Canada, National Parole Board.

**Provincially and territorially.** Newfoundland, Department of Justice; Prince Edward Island, Department of Justice; Nova Scotia, Department of Attorney General; New Brunswick, Ministry of Justice; Quebec, Department of Justice; Ontario, Ministry of Correctional Services; Manitoba, Department of Community Services and Corrections; Saskatchewan, Department of Justice; Alberta, Department of the Solicitor General; British Columbia, Ministry of the Attorney General; Yukon, Department of Justice; Northwest Territories, Department of Social Services.

### 20.7.1 Custodial services

Shared responsibility for custodial services spans across each of the municipal, provincial and federal levels of government. This three-tiered structure has been incorporated in divergent ways across Canada.

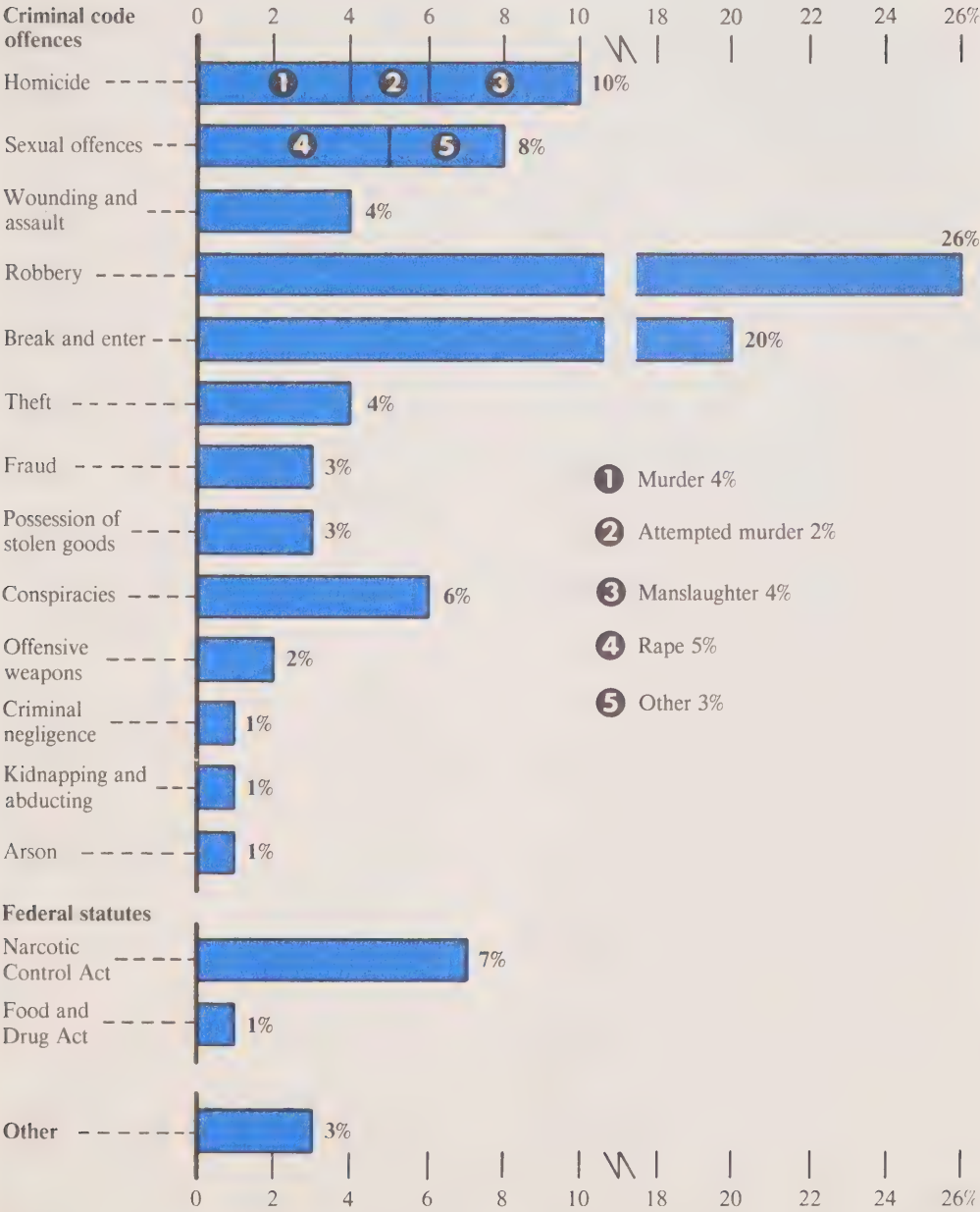
Although custodial sentences of two years less a day are under the authority of provincial government agencies, there may be exceptions. Federal offenders are normally held in the provincial system prior to transfer for a 30-day period of appeal. Additionally, with transfer agreements between the federal government and the provinces and territories, some federal offenders are detained in provincial facilities and vice versa.

The degree to which municipal and provincial governments share responsibility for temporary detainment is another source of variation. Some provinces assume no responsibility, others have partial responsibility, and still others have total responsibility.

Service structures also differ in the provision of custodial services through the private sector. Normally, sentenced inmates are transferred from a

Chart 20.3  
Warrant of committal admissions to federal custody  
by major offence, 1982-83

Major offences: 4,078 admissions



secure custodial environment to private facilities which usually allow for regular access to community resources. This has been the case in most jurisdictions. In recent years, private facilities have been integrated in some cases into the government facility network with a resultant impact on the corresponding average inmate counts.

### 20.7.2 Non-custodial services

The need to further develop community correctional services has been brought to the forefront in recent years, particularly in light of the high costs and questionable benefits of the custodial response to certain offender groups.

Non-custodial programs provided in each provincial jurisdiction are not limited to probation. However, probation is the primary community-based disposition as a sentencing alternative to incarceration. In recent years, other non-custodial correctional programs have emerged to varying degrees, some of them available as conditions of probation orders.

Use of specialized programs aimed at specific target groups such as females, natives, and drinking and driving offenders has grown in recent years. So have compensatory sentences, for example, community service orders, fine options and restitution. Involvement of probation and parole officers in the supervision of temporary absence cases varies across the country. As a result, caseloads reported do not represent a definitive picture of the offender population under community supervision.

Due to increasing community supervision in caseloads, volunteer programs have been established in most jurisdictions. Combined with the fact that probation officers supervise juveniles in some provinces, it is difficult to arrive at an accurate and comparable measure of officer caseload.

**The National Parole Board** is an independent agency in the department of the solicitor general. It is an integral part of the Canadian criminal justice system in its daily operations and works together with other components of the system.

Under the federal Parole Act, the National Parole Board is primarily responsible for: granting full parole and day parole to both federal and provincial inmates; granting to federal inmates those temporary absences which cannot be authorized at the institutional level; and, terminating or revoking day paroles and revoking parole and mandatory supervision releases.

Since September 1978, as a result of amendments to the Parole Act, it has been possible for any province to establish its own parole board. Three provinces, Quebec, Ontario and British Columbia, have exercised this right and have assumed responsibility for granting, refusing and terminating parole for inmates serving definite sentences in provincial facilities. New Brunswick also operates a provincial parole board but only for the release of adult inmates

pursuant to a provincial statute. All other provincial inmates remain the responsibility of the National Parole Board; however, provincial inmates must apply for parole under Section 8(1) of the Parole Act while federal inmates are considered automatically for parole at their parole eligibility dates.

### 20.7.3 Correctional expenditures, facilities and personnel

Government spending on adult correctional services during 1982-83 amounted to about \$1.1 billion, including \$568 million federally (\$55 million in construction costs) and \$516 million provincially. This was an increase of \$141 million or 15% from the previous year's total of \$943 million.

In 1982-83, three-quarters of all corrections expenditures were for custodial services and the operation of the 235 institutions with 16% going to headquarters or regional offices and general administration and the remaining 9% to community supervision. There were 445 probation and parole offices in Canada as of March 31, 1983. Staff salaries for 23,417 person-years in government correctional agencies accounted for over two-thirds of the total expenditure. Correctional officers represented almost one-half, or 10,853 person-years, and probation and parole officers 6%, or 1,424 person-years (Table 20.10).

### 20.7.4 Offender caseload

In 1982-83 there were on average 108,000 offenders in the Canadian corrections caseload, a 29% increase since 1978-79. The majority, 81,000 or 75%, were under some form of community supervision, while 27,000 or 25% were held in custody, showing little change in proportion over the five-year period (Table 20.11).

The average provincial inmate population increased by 14% over the 1981-82 figure and 27% over the five-year period, reaching 17,149 in 1982-83; the average federal inmate population in 1982-83 was 9,775, an increase of 10% over 1981-82 and 20% over the five years. Besides, there were on average about 2,500 provincial inmates and 1,000 federal inmates who were on register but not in custody at the time of the count.

While 75% of persons in the total correctional caseload were under community supervision, about 10% of total correctional expenditures were for the provision of these services in 1982-83.

### 20.7.5 Caseload characteristics

Female offenders comprised 6% of all provincial sentenced admissions to custody, 2% of all federal warrant of committal admissions to custody, and 16% of all admissions to provincial probation (Table 20.12). Inmates admitted to provincial custody are typically 25 years old and one-third of all admissions are for fine default; federal inmates have a median age of 28 years and are typically incarcerated for

either robbery or break and enter. The median sentence length on admission to provincial facilities in 1982-83 was 26 days; the corresponding sentence length for inmates admitted to federal penitentiaries was three and one-half years. The average provincial probationer is 21 years of age and is serving a probation order of 11 months.

Of total sentenced admissions (131,291) to provincial facilities during 1982-83, 69% were admitted under a criminal code offence, including drinking and driving, 21% under a provincial statute, 5% under a municipal bylaw, and the remaining 4% under a federal statute, usually drug-related. Specifically, fine defaulters accounted for one-third of all admissions to provincial custody and drinking and driving offenders accounted for 17% of total sentenced admissions (Chart 20.2).

At the federal level, 50% of all warrant of committal admissions were for robbery, break and enter, and theft. Murder, attempted murder and manslaughter offences accounted for 10%, while sexual offences (including rape) accounted for 8% (Chart 20.3).

## 20.8 Victims of crime

In recent years, criminal justice agencies and private sector groups have taken a number of initiatives for the victims of crime. Victims' services have been established across the country by both governments and private agencies. In 1981 a federal-provincial task force examined the needs of victims of crime and considered action which could be taken to improve methods of assistance to them. In 1982, the solicitor general's department with the assistance of Statistics Canada conducted a victimization survey in seven major urban centres. This survey provides information on the victims of certain crimes, the risks and impact of victimization, the extent and distribution of reported and unreported crime, and public awareness of and participation in crime compensation and crime prevention programs.

### 20.8.1 Criminal injuries compensation

Criminal injuries compensation is related to two major areas of activity, the administration of justice and social security. From a justice perspective, it represents development in recent efforts to improve the criminal justice system by compensating innocent victims of crime. From a social security point of view, it forms part of a large network of programs to ensure Canadian residents of income security and necessary social services regardless of socio-economic status.

In each province and territory except Prince Edward Island, there is a program to compensate for injury or death as a result of: some specified or defined crime committed by another person; an effort to prevent crime; or an effort to arrest an offender or suspected offender. Criminal injuries

compensation legislation has been in effect in Newfoundland, Ontario, Saskatchewan and Alberta from the late 1960s, and in other provinces from the early 1970s. Yukon and Northwest Territories have had legislation from the mid-1970s. Nova Scotia also had legislation from that time, but it went into force in May 1981. The federal department of justice started sharing costs of criminal injuries compensation programs in 1973.

Administration of criminal injuries compensation programs differs from jurisdiction to jurisdiction. For example, while all programs cover compensation for certain offences specified in the federal-provincial cost sharing agreement, such as homicide, assault and robbery, a jurisdiction may also compensate for other offences, such as abduction, and impaired or dangerous driving.

Compensation may be in lump sum awards, periodic awards or a combination of both. There are variations in the maximum amounts payable. As a general rule, no compensation is paid for property damage. Table 20.13 shows the number of applications received, their disposition, and the amount of compensation paid.

## 20.9 Canadian Centre for Justice Statistics

The Canadian Centre for Justice Statistics is the focal point of a federal-provincial initiative dedicated to national statistics and information on the justice system in Canada. Established in Statistics Canada in 1981, the centre is responsible for producing information on the extent and nature of reported crime and the administration of criminal, civil and administrative justice in Canada.

This information is designed to serve governments in the development, operation and evaluation of justice policies and programs, as well as to contribute to public understanding of how the justice system operates and of its cost. The centre also provides assistance to federal and provincial agencies in developing information systems that can serve both local and national needs.

Reflecting these two responsibilities, the centre has two main operational arms, one dedicated to the development and operation of statistical programs, the other designed to provide technical assistance to individual jurisdictions.

The centre operates under the responsibility and authority of Statistics Canada, but its programs and priorities are established in conjunction with federal, provincial and territorial departments and agencies responsible for the administration of justice, represented through a number of formal committees.

### 20.9.1 Statistics and information programs

The centre's statistical programs provide information on the number and nature of cases dealt with by each

major sector of the justice system: law enforcement, legal aid, courts and correctional services, as well as on resources, expenditures and personnel in each sector. Descriptive information is available on the structure, legislative authority and programs of each sector.

Ongoing data collection programs provide time series information and in-depth studies to provide information on high priority national justice issues.

**Law enforcement.** This program produces statistics on criminal incidents reported to the police, how they are dealt with, and police administration in Canada. Information is provided by accredited police and other law enforcement agencies. In-depth information on homicide incidents is also produced, covering such areas as the characteristics of offenders and victims, and means of committing the offence.

**Legal aid.** This program produces statistical and descriptive information on such legal aid activities as the provision of legal advice, counsel representation, and other legal services in criminal and civil cases.

**Courts.** A courts program provides information on courts and criminal prosecution services. Data include the number of criminal charges dealt with by courts at all levels. Information on manpower, resources and costs of courts and prosecutions is produced biennially. Developmental projects are under way to produce more detailed information on court cases. Descriptive information is compiled on the family and civil courts of Canada.

**Correctional services.** A corrections program provides information on basic aspects of federal and provincial correctional services such as prisons, penitentiaries, probation and parole services. Statistics are available on expenditures and personnel

of the corrections sector, as well as on the inmate, probation and parole populations.

**Juvenile justice.** This program is designed to produce information on the juvenile justice system in such areas as law enforcement, screening, alternative measures, pre-court, court and post-court processes. It currently produces information on young offenders dealt with by the courts.

#### 20.9.2 Technical assistance program

A service agency in the centre, the technical assistance directorate supports the development of statistical programs and the transfer of technology between jurisdictions, helping them to develop operational information systems through technical expertise and resource support. The technical assistance program touches upon the major sectors of the justice system in the provinces, territories and the federal government.

**The federal-provincial partnership.** The centre operates on the principle that national justice information is a shared responsibility. A justice information council consists of all deputy ministers responsible for the administration of justice together with the chief statistician of Canada. Its main responsibility is to provide direction to and monitor the federal-provincial initiative, reviewing programs, priorities and progress.

A formal liaison officers committee represents justice information council members. Its primary task is to develop with the centre the specific programs and projects to be undertaken. Members are spokespersons for their jurisdictions. Program advisory committees also provide expert advice to the centre in the development of particular programs and projects.

#### Source

Canadian Centre for Justice Statistics, Statistics Canada. Co-ordinator, Beverly Prentice.

#### Selected references

- Adult correctional services in Canada, 1982-83.* Canadian Centre for Justice Statistics, Statistics Canada 85-211 (annual), Ottawa, 1984.
- 12th annual report, 1982-83.* Law Reform Commission of Canada, Ottawa, 1984. *Canada's system of justice.* Department of Justice, Ottawa, 1978.
- Crime and traffic enforcement statistics, 1982.* Canadian Centre for Justice Statistics, Statistics Canada 85-205 (annual), Ottawa, March 1984.
- Criminal injuries compensation, 1983.* Health Division and Canadian Centre for Justice Statistics, Statistics Canada: Department of Justice, Statistics Canada 86-502 (occasional), Ottawa, 1983.
- Homicide in Canada - 1982: a statistical perspective.* Canadian Centre for Justice Statistics, Statistics Canada 85-209 (annual), Ottawa, 1984.
- Juristat service bulletin.* Canadian Centre for Justice Statistics, Statistics Canada 85-002 (occasional), Ottawa, October 1981.
- Juvenile delinquents, 1982.* Canadian Centre for Justice Statistics, Statistics Canada 85-X-202 (annual), Ottawa, 1983.
- Legal aid, 1981.* Health Division, Social Security Section and Canadian Centre for Justice Statistics, Statistics Canada 85-507, Ottawa, 1981.
- Manpower, resources and costs of courts and criminal prosecutions in Canada 1980-82.* Canadian Centre for Justice Statistics, Statistics Canada 85-212E, Ottawa, 1983.

# TABLES

.. not available  
 ... not appropriate or not applicable  
 — nil or zero  
 -- too small to be expressed

e estimate  
 p preliminary  
 r revised  
 certain tables may not add due to rounding

## 20.1 Court operations, fiscal year 1981-82

Province or territory and jurisdiction	Court operations		
	Expenditures \$	Person- years	Cost per capita <sup>1</sup> \$
Newfoundland	6,140,429	198.0	10.82
Prince Edward Island	1,266,666	42.3	10.33
Nova Scotia	12,153,978	365.9	14.34
New Brunswick	9,263,343	241.0	13.30
Quebec	104,743,440	4,167.6	16.27
Ontario	128,769,452	3,479.0	14.93
Manitoba	14,481,239	517.0	14.11
Saskatchewan	10,942,229	325.1	11.30
British Columbia	81,800,402	1,876.4	29.81
Yukon	1,230,502	25.4	53.15
Northwest Territories	2,394,918	34.9	52.36
Supreme Court of Canada	5,272,500	90.5	—
Federal Court of Canada	6,725,655	155.7	—
Commissioner for federal judicial affairs	2,054,000	26.0	—
Canada <sup>2</sup>	387,238,753	11,544.8	17.52

<sup>1</sup>The per capita cost figures have been calculated using data from the Census of Canada, 1981, Statistics Canada 92-901, Vol.1.

<sup>2</sup>Alberta is not included in these figures.

## 20.2 Criminal prosecutions, fiscal year 1981-82

Province or territory and jurisdiction	Prosecutions		
	Expenditures \$	Person- years	Cost per capita <sup>1</sup> \$
Newfoundland	843,471	21.0	1.49
Prince Edward Island	192,126	5.6	1.57
Nova Scotia	2,130,260	63.5	2.51
New Brunswick	1,590,321	45.4	2.28
Quebec	10,993,535	352.5	1.71
Ontario	21,946,800	436.0	2.54
Manitoba	2,310,208	74.0	2.25
Saskatchewan	4,041,500	60.7	4.17
British Columbia	14,740,551	280.0	5.37
Yukon	294,698	6.0	12.73
Northwest Territories	679,691	15.5	14.86
Federal Department of Justice	18,952,882	286.6	—
Canada <sup>2</sup>	78,716,043	1,646.8	3.56

<sup>1</sup>The per capita cost figures have been calculated using data from the Census of Canada, 1981, Statistics Canada 92-901, Vol.1.

<sup>2</sup>Alberta is not included in these figures.

**20.3 Actual offences by type<sup>1</sup>, 1977-82**

Type of offence	1977	1978	1979	1980	1981	1982	Per cent change 1977-82
<b>Violent offences</b>							
Homicide	707	658	631	593	647	670	- 5.2
Attempted murder	684	742	754	792	900	943	37.9
Sexual offences	10,932	11,598	12,333	12,787	13,313	13,864	26.8
Rape	1,886	2,014	2,291	2,315	2,559	2,528	34.0
Other sexual offences	9,046	9,584	10,042	10,472	10,754	11,336	25.3
Assaults (not indecent)	103,931	106,301	112,911	117,111	121,076	125,912	21.1
Robbery	19,491	19,673	20,899	24,581	26,292	27,257	39.8
Violent offences - total	135,745	138,972	147,528	155,864	162,228	168,646	24.2
<b>Property offences</b>							
Breaking and entering	270,659	278,480	296,437	349,694	367,250	369,882	36.7
Theft - motor vehicle	84,252	83,130	91,445	93,928	96,229	86,997	3.3
Theft over \$200	114,000	130,024	169,950	224,595	266,288	295,261	159.0
Theft under \$200	486,821	497,336	516,184	539,490	561,827	570,556	17.2
Have stolen goods	18,433	19,715	20,997	24,657	25,599	25,830	40.1
Frauds	85,523	88,557	91,684	102,255	112,327	118,397	38.4
Property offences - total	1,059,688	1,097,242	1,186,697	1,334,619	1,429,520	1,466,923	38.4
<b>Other criminal code offences</b>	458,587	478,083	521,046	554,916	576,453	568,099	23.9
<b>Total criminal code offences</b>	1,654,020	1,714,297	1,855,271	2,045,399	2,168,201	2,203,668	33.2
<b>Federal statute offences</b>							
Drug offences	65,938	60,747	64,923	74,196	75,104	64,636	- 2.0
Other federal statutes	65,782	73,284	57,634	45,589	45,320	48,229	- 26.7
Total federal statutes	131,720	134,031	122,557	119,785	120,424	112,865	- 14.3
<b>Total provincial statutes</b>	379,588	398,324	438,204	452,812	481,232	434,351	14.4
<b>Total municipal bylaws</b>	61,237	59,313	69,598	74,163	80,202	87,956	43.6
<b>Total offences</b>	2,226,565	2,305,965	2,485,630	2,692,159	2,850,059	2,838,840	27.5

<sup>1</sup>Based on uniform crime reporting.**20.4 Traffic enforcement statistics, by type of criminal code offence<sup>1</sup>, 1977-82**

Type of offence	1977	1978	1979	1980	1981	1982
<b>Criminal negligence</b>						
Causing death	256	217	309	305	300	261
Causing bodily harm	165	137	173	191	223	250
Operating motor vehicle	848	777	1,069	1,026	1,179	1,062
<b>Fail to stop at the scene of accident</b>	75,236	77,180	88,433	75,318	96,856	91,422
<b>Dangerous driving</b>	7,347	6,436	7,776	7,901	8,010	6,518
<b>Failure or refusal to provide sample of breath</b>	14,300	14,560	16,145	16,403	17,405	17,512
<b>Driving while impaired</b>	140,731	141,328	148,234	152,813	157,977	149,800
<b>Driving while disqualified<sup>2</sup></b>	28,089	26,308	30,821	29,787	5,999	465
<b>Total</b>	266,972	266,943	292,960	283,744	287,949	267,290

<sup>1</sup>Extracted from crime and traffic enforcement statistics (Statistics Canada 85-205).<sup>2</sup>The large decrease reported between 1980 and 1981 was the result of a decision by the Supreme Court of Canada on February 3, 1981 that declared this offence [Section 238 (3) of the Criminal Code] unconstitutional.**20.5 Number and rate<sup>1</sup> of homicide offences<sup>2</sup> in Canada, 1977-82**

Year, number and rate	Murder	Manslaughter	Infanticide	Total homicide offences
<b>1977</b>				
Number	628	78	5	711
Rate	2.70	0.34	0.02	3.06
<b>1978</b>				
Number	592	58	11	661
Rate	2.52	0.25	0.05	2.82

**20.5 Number and rate<sup>1</sup> of homicide offences<sup>2</sup> in Canada, 1977-82 (concluded)**

Year, number and rate		Murder	Manslaughter	Infanticide	Total homicide offences
1979	Number	587	39	5	631
	Rate	2.48	0.16	0.02	2.66
1980	Number	493	97	3	593
	Rate	2.05	0.41	0.01	2.47
1981	Number	601	44	3	648
	Rate	2.47	0.18	0.01	2.66
1982	Number	624	42	4	670
	Rate	2.53	0.17	0.02	2.72

<sup>1</sup>Rates are calculated on the basis of 100,000 population.<sup>2</sup>One "offence" is counted for every victim.**20.6 Full-time police personnel, actual strength,<sup>1</sup> by type of force, 1978-83**

Type of force	1978	1979	1980	1981	1982	1983
Royal Canadian Mounted Police	18,330	18,288	18,978	19,696	20,035	19,577
Officers	13,991	14,021	13,879	14,417	14,178	14,159
Other <sup>2</sup>	4,339	4,267	5,099	5,279	5,857	5,418
Ontario Provincial Police	5,278	5,226	5,247	5,285	5,358	5,315
Officers	4,095	4,050	4,064	4,094	4,203	4,188
Other <sup>2</sup>	1,183	1,176	1,183	1,191	1,155	1,127
Quebec Police Force	5,418	5,461	5,582	5,544	5,470	5,391
Officers	4,403	4,445	4,585	4,571	4,518	4,450
Other <sup>2</sup>	1,015	1,016	997	973	952	941
Municipal Police (excl. RCMP and OPP contracts)	35,342	35,090	35,742	36,427	36,601	36,421
Officers	28,973	29,164	29,493	29,862	29,877	29,679
Other <sup>2</sup>	6,369	5,926	6,249	6,565	6,724	6,742
Canadian National Railways Police	456	456	451	446	422	394
Officers	431	431	427	422	402	376
Other <sup>2</sup>	25	25	24	24	20	18
Canadian Pacific Railways Police	425	424	423	399	404	402
Officers	327	322	334	311	312	307
Other <sup>2</sup>	98	102	89	88	92	95
Ports Canada Police	298	288	264	252	266	256
Officers	220	213	204	194	206	199
Other <sup>2</sup>	78	75	60	58	60	57
New Brunswick Highway Patrol <sup>3</sup>	..	..	..	30	33	62
Officers	..	..	..	26	29	55
Other <sup>2</sup>	..	..	..	4	4	7
Canada	65,547	65,233	66,687	68,079	68,589	67,818
Officers	52,440	52,646	52,986	53,897	53,725	53,413
Other <sup>2</sup>	13,107	12,587	13,701	14,182	14,864	14,405

<sup>1</sup>As at December 31 of each year.<sup>2</sup>Includes civilians, cadets, and other full-time personnel.<sup>3</sup>The collection of New Brunswick Highway Patrol staffing information began in the 1981 reporting year.

## 20.7 Criminal code and other federal statute charges adjudicated in juvenile courts<sup>1</sup>, 1977-82

Province or territory	1977	1978	1979	1980	1981	1982
Newfoundland	1,391	1,690	2,295	2,553	3,057	2,424
Prince Edward Island	..	..	97	175	236	181
Nova Scotia	1,722	1,752	1,961	1,796	1,586	1,742
New Brunswick	1,169	1,245	1,645	1,703	1,552	1,536
Quebec	28,359	27,581	12,839	16,967	25,074	27,713
Ontario	23,050	21,834	22,044	22,154	23,922	22,885
Manitoba	10,792	10,367	9,869	10,274	12,312	11,574
Saskatchewan	1,681	1,875	1,567	2,167	2,794	2,440
Alberta	10,806	10,338	8,492	7,718	9,162	8,852
British Columbia	..	..	..	11,506	13,460	13,638
Yukon	215	212	157	145	251	212
Northwest Territories	..	..	..	460	542	486
<b>Total</b>	<b>79,185</b>	<b>76,894</b>	<b>60,966</b>	<b>77,618</b>	<b>93,948</b>	<b>93,683</b>

<sup>1</sup>Includes all federal statute charges adjudicated, regardless of court decision. A small percentage of charges against adults (approximately 1% of the total in each year) are included.

## 20.8 Number of charges of delinquency adjudicated, by type of charge<sup>1</sup>

Type of charge	1977 <sup>2</sup>	1978 <sup>2</sup>	1979 <sup>3</sup>	1980	1981	1982
Criminal code offences	74,897	72,032	57,497	72,961	89,376	89,349
Offensive weapons	694	755	802	919	1,341	1,456
Sexual offences	374	406	433	473	502	495
Disorderly conduct	734	706	539	604	661	618
Murder	16	16	16	17	15	16
Attempted murder	12	21	37	21	20	32
Manslaughter	4	9	2	7	3	11
Assaults	1,813	1,884	1,784	2,186	2,368	2,589
Theft over \$200	5,207	6,282	4,889	6,118	7,467	7,159
Theft under \$200	13,501	15,045	12,093	13,217	16,159	16,471
Motor vehicle	1,609	1,448	1,263	1,452	1,543	1,322
Theft (amount unspecified)	4,989	1,754	779	1,212	1,845	2,494
Robbery	1,218	1,261	1,234	1,418	1,665	1,702
Break and enter	23,622	23,803	19,156	25,376	32,254	29,305
Possession of stolen goods	7,816	5,624	3,950	5,435	7,026	9,673
Forgery and similar crimes	974	1,147	960	1,365	1,352	1,539
Fraud	518	423	287	363	470	473
Mischief	6,676	6,112	5,233	6,641	7,476	6,959
Arson	430	343	330	437	369	389
Other criminal code offences	4,690	4,993	3,710	5,700	6,840	6,646
Other federal statute offences	4,288	4,862	3,469	4,657	4,572	4,334
<b>Total</b>	<b>79,185</b>	<b>76,894</b>	<b>60,966</b>	<b>77,618</b>	<b>93,948</b>	<b>93,683</b>

<sup>1</sup>Includes charges adjudicated which related to criminal code and federal statute offences. Charges against adults adjudicated under the Juvenile Delinquents Act are included.

<sup>2</sup>The 1977 and 1978 totals exclude PEI, BC and NWT.

<sup>3</sup>The 1979 total excludes BC and NWT.

20.9 Number of persons having charges adjudicated, by province and court decision<sup>1</sup>

Province or territory	1978		1979		1980		1981		1982	
	Found delinquent	Not found delinquent	Found delinquent	Not found delinquent	Found delinquent	Not found delinquent	Found delinquent	Not found delinquent	Found delinquent	Not found delinquent
Nfld.	1,165	74	1,433	98	1,845	147	1,856	130	1,551	111
PEI	..	..	49	6	87	5	110	14	70	17
NS	1,212	124	1,270	118	1,156	131	1,033	131	1,087	135
NB	848	39	1,042	106	1,041	78	790	115	816	88
Que.	15,303	1,624	4,750	674	4,546	871	6,264	986	7,733	1,199
Ont.	10,272	2,864	10,578	2,685	9,974	3,415	9,973	3,731	9,049	3,568
Man. <sup>2</sup>	2,921	1,205	2,666	1,111	4,504	2,344	9,567	2,777	8,339	2,278
Sask.	770	39	679	58	795	95	862	77	826	82
Alta.	5,697	605	4,283	411	3,766	372	4,447	372	4,053	321
BC	..	..	..	..	..	..	..	..	..	..
YT	99	7	67	12	73	10	84	9	76	20
NWT	..	..	..	..	221	15	286	20	209	19
Total	38,287	6,581	26,817	5,279	28,008	7,483	35,272	8,362	33,809	7,838
Persons having charges adjudicated	44,868		32,096		35,491		43,634		41,647	

<sup>1</sup>Includes persons having charges adjudicated which related to federal statute, provincial statute, and municipal bylaw offences. Adults having charges adjudicated under the Juvenile Delinquents Act are included.

<sup>2</sup>No data for individuals facing charges under the Highway Traffic Act and Liquor Control Act in Manitoba for 1978 and 1979. The increase observed from 1980 to 1981 is attributable to improvements in reporting practices for these types of offences.

## 20.10 Expenditures, facilities and personnel for provincial and federal corrections, Canada, fiscal year 1982-83

Jurisdiction	Expenditure (\$'000)	Number of facilities		Person-year expended
		Custodial	Non- custodial	
Provincial corrections	516,011	174	387	13,343
Federal corrections	568,111	61	58	10,074
Canada, total	1,084,122	235	445	23,417

## 20.11 Average offender caseload in Canadian corrections<sup>1</sup>, 1978-79 to 1982-83

Average actual caseload	Year	Provincial corrections	Federal corrections	Canada total
Custodial <sup>2</sup>	1978-79	13,479	8,484	21,963
	1979-80	13,412	8,568	21,980
	1980-81	13,900	8,650	22,550
	1981-82	15,096	8,940	24,036
	1982-83	17,149	9,775	26,924
Non-custodial <sup>3</sup>	1978-79	54,639	7,099	61,738
	1979-80	60,799	6,486	67,285
	1980-81	64,744	6,043	70,787
	1981-82	67,764	6,541	74,305
	1982-83	74,215	6,697	80,912
Total	1978-79	68,118	15,583	83,701
	1979-80	74,211	15,054	89,265
	1980-81	78,644	14,693	93,337
	1981-82	82,860	15,481	98,341
	1982-83	91,364	16,472	107,836

<sup>1</sup>Includes the offender caseload handled by both the federal and provincial governments combined but excludes offenders in municipally operated corrections.

<sup>2</sup>Refers to actual count and therefore excludes inmates temporarily not in custody at the time of count. In 1982-83 approximately 2,500 provincial and 1,080 federal inmates fell into this category.

<sup>3</sup>Figures for the federal non-custodial population which include full parole, day parole and mandatory supervision represent year-end counts.

## 20.12 Caseload characteristics, provincial and federal corrections, Canada, fiscal year 1982-83

Jurisdiction	Sentenced admissions				
	Total number	Female %	Male %	Median age	Median sentence
Provincial corrections					
Custodial	131,291	6	94	25 yrs	26 days
Probation	66,008	16	84	21 yrs	11 months
Federal corrections <sup>1</sup>	4,080	2	98	28 yrs	42 months
Canadian adult population	18,440,200	51	49	37 yrs	...

<sup>1</sup>Excludes releases to parole and mandatory supervision.

20.13 Applications, dispositions and payments for criminal injuries compensation

Province or territory	Applications received	Disposition		Compensation paid <sup>1</sup> (\$'000)
		Dismissed	Awards granted	
1981-82				
Newfoundland	12	—	5	17.3
Nova Scotia	33	5	17	72.1
New Brunswick	16	2	16	34.4
Quebec	1,651	300	1,003	8,098.4
Ontario	1,250	128	979	2,758.8
Manitoba	282	50	125	606.0
Saskatchewan	102	20	63	193.3
Alberta	273	27	269	497.5
British Columbia	860	254	560	2,199.9
Yukon	5	1	4	24.2
Northwest Territories	12	—	—	22.1
Canada				
1975-76 <sup>2,3,4</sup>	2,258	353	1,829	4,412.1
1976-77 <sup>4</sup>	2,602	349	2,454	6,221.6
1977-78 <sup>4</sup>	2,914	340	2,392	6,560.2
1978-79 <sup>4</sup>	3,210	351	2,641 <sup>5</sup>	7,258.2
1979-80 <sup>4</sup>	3,385	410	2,805 <sup>5</sup>	9,201.1
1980-81 <sup>4</sup>	3,860	711	2,959	12,032.9
1981-82 <sup>4</sup>	4,496	787	3,041	14,524.0

<sup>1</sup>Amounts shown for compensation may include periodic payments related to cases closed in previous years.  
<sup>2</sup>For Alberta, January-March 1976; no federal-provincial cost-sharing agreement existed for earlier periods.  
<sup>3</sup>No claims were received from Yukon for 1975-76.  
<sup>4</sup>Up to 1980-81, exclusive of Prince Edward Island and Nova Scotia, for which jurisdictions no federal-provincial cost-sharing arrangements existed; for the latest year, exclusive of Prince Edward Island, which is now the only jurisdiction without a criminal injuries compensation program.  
<sup>5</sup>Includes estimated component.

Note: Applications dismissed and awards granted do not equal applications received. Applications received are not necessarily processed in the same year, and cases dismissed or compensated may relate to applications of earlier years. Only three of the more significant disposition categories are shown. Some others are: applications heard – further evidence required, interim awards and supplementary awards.

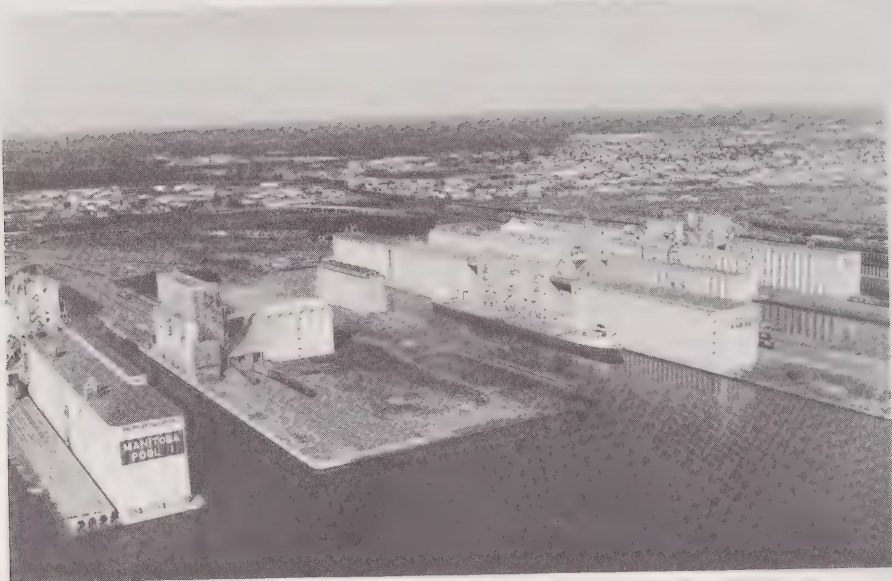
**Sources**  
20.1 – 20.2 *Juristat*, Vol. 4, No. 2. Statistics Canada 85-002, Canadian Centre for Justice Statistics (CCJS), Ottawa, March 1984.  
20.3 – 20.4 Extracted from annual issues of *Crime and traffic enforcement statistics*. Statistics Canada 85-205, CCJS.  
20.5 Homicide files, CCJS.  
20.6 Law enforcement program, CCJS.  
20.7 – 20.9 Juvenile justice program, CCJS.  
20.10 – 20.12 *Adult correctional services in Canada* 1982-83, Statistics Canada 85-211, CCJS.  
20.13 *Criminal injuries compensation* 1983, Statistics Canada 86-502, CCJS.



CHAPTER 21

---

# EXTERNAL RELATIONS, TRADE AND DEFENCE



## HIGHLIGHTS

---

There is no more important external relationship for Canada than that with the United States. In trade each is the other's best customer. In 1983 the United States bought 72.9% of Canada's exports, the highest share in 35 years, and was the source of 71.6% of Canada's imports.

Japan is Canada's second largest trading partner. The United Kingdom is third but its share in both exports and imports declined during 1981-83.

In recent years, the USSR and China have been predominant buyers of Canadian wheat. Venezuela is the leading supplier of oil to Canada.

Development of diplomatic and commercial relations with almost all the independent African states has been accompanied by a growing program of Canadian development assistance to Africa. In Asia substantial development aid has gone to Pakistan, Bangladesh and Sri Lanka. In 1983 Canada reaffirmed a commitment to the Commonwealth Caribbean as a priority region for aid and development.

## EXTERNAL RELATIONS, TRADE AND DEFENCE

<b>21.1</b>	<b>Restructuring external operations</b>	<b>669</b>
<b>21.2</b>	<b>Canada's international status</b>	<b>669</b>
<b>21.3</b>	<b>Multilateral activities</b>	<b>670</b>
21.3.1	Canada and the Commonwealth	670
21.3.2	Canada and "la Francophonie"	672
21.3.3	Canada and the OECD	672
21.3.4	Canada and the United Nations	672
21.3.5	UN specialized agencies	674
21.3.6	International environment programs	675
<b>21.4</b>	<b>Activities by region</b>	<b>676</b>
21.4.1	The United States	676
21.4.2	The Caribbean	676
21.4.3	Latin America	676
21.4.4	Europe	676
21.4.5	The Middle East	677
21.4.6	Africa	677
21.4.7	Asian and Pacific region	677
<b>21.5</b>	<b>International trade</b>	<b>678</b>
21.5.1	Summary	678
21.5.2	Trade by commodity groups, 1979-83	678
21.5.3	Imports and exports by country	678
21.5.4	Reconciled data of trade with the United States	679
21.5.5	Statistics and definitions	679
<b>21.6</b>	<b>Federal trade services</b>	<b>680</b>
21.6.1	Department of External Affairs	680
21.6.2	Export Development Corp.	681
21.6.3	Tariff rates	682
21.6.4	Trade agreements	683
<b>21.7</b>	<b>Canadian development assistance programs</b>	<b>683</b>
21.7.1	Canadian International Development Agency	683
21.7.2	International Development Research Centre	684
21.7.3	CUSO	685
21.7.4	CESO	685
<b>21.8</b>	<b>Defence</b>	<b>685</b>
21.8.1	Department of National Defence	685
21.8.2	NATO and NORAD	685
21.8.3	The Canadian forces	685
21.8.4	Peacekeeping operations	687
21.8.5	Military training assistance	687
<b>21.9</b>	<b>Emergency planning</b>	<b>687</b>

## TABLES

21.1	External Affairs personnel abroad	689
21.2-21.4	Imports and exports, customs basis	689
21.5, 21.6	Trade with principal trading areas	691
21.7	Canada-United States trade summary	691
21.8	Price and volume trade indexes	692
21.9, 21.10	Value of total imports and exports	693
21.11, 21.12	Imports and exports by geographic region	698
21.13	Travel summary, Canada and other countries	704
21.14	Official Canadian development assistance	704
21.15	National Defence expenditures	705
21.16	Canadian Armed Forces strength	705

## CHARTS

Chart 21.1	Commonwealth countries	671
Chart 21.2	La Francophonie	673

## CHAPTER 21

# EXTERNAL RELATIONS, TRADE AND DEFENCE

### 21.1 Restructuring external operations

Restructuring of the department of external affairs (External Affairs Canada) announced in January 1982, was part of a reorganization of several government departments concerned with Canada's economic development. Its purpose was to improve the implementation of new policies for national economic expansion and enhance export trade ability. The result of these changes is a fundamentally changed departmental mandate which now includes responsibility for trade policy and trade promotion along with the traditional area of foreign policy and more recently acquired functions related to immigration.

In 1971 the support services of various departments operating programs abroad were incorporated in the department. In April 1981 the responsibility for immigration programs abroad was transferred to the department together with the foreign service staff of the Canadian employment and immigration commission. These programs include the recruitment of immigrants, the admission of refugees and the entry into Canada of tourists, students and temporary workers. Similarly, the field staff of the Canadian International Development Agency (CIDA) was brought into the department.

In January 1982 when the federal government effected the major reorganization of its economic and external affairs departments, the international trade policy and trade promotion functions of the department of industry, trade and commerce were transferred to external affairs. In September 1983 a second phase of the new organization was implemented to integrate more closely the political, economic and trade functions of the department.

### 21.2 Canada's international status

The growth of Canada's international status is reflected in the development of the external affairs department since its establishment in 1909. Until the 20th century Canadian negotiations with foreign countries were conducted through the British foreign office and dealings with other parts of the Empire through a colonial office. The gradual recognition of

Canadian autonomy in international affairs and increased Canadian responsibilities abroad made expansion of services and representation after World War I inevitable and necessary. An important step in the evolution of Canada's international status was an agreement reached at the 1926 Imperial Conference allowing for Canadian sovereignty in international negotiations and affairs.

In the 1920s and 1930s Canada established its own diplomatic relations with several countries, including the United States, France and Japan. In 1983 there were 115 diplomatic and consular missions (plus 19 honorary consulates) in 124 countries; many Canadian embassies and high commissions are accredited to two or more governments, thus permitting Canada to maintain diplomatic relations with 68 additional countries. One hundred countries have diplomatic missions in Ottawa and another 47 states have non-resident accreditation. (See Appendix 5, Diplomatic and consular representation.)

Membership in international organizations has entailed establishment of permanent Canadian delegations to the United Nations in New York and at the organization's European headquarters in Geneva. There are also permanent Canadian missions to UN agencies in Paris; the Mutual and Balanced Force Reduction Talks, Vienna; the North Atlantic Treaty Organization, Brussels; the Organization for Economic Co-operation and Development, the International Energy Agency, and the United Nations Educational, Scientific and Cultural Organization, Paris; and the European Community, Brussels. Canada also maintains a permanent observer mission to the Organization of American States in Washington, DC. In addition, officials of the external affairs department represent Canada at many international conferences.

Today, Canada's status is reflected in its role in international negotiations over such vital issues as human rights, the North-South dialogue, disarmament, law of the sea, energy management and nuclear non-proliferation.

**Federal-provincial aspects.** A federal-provincial co-ordination division in the external affairs

department maintains liaison with the provinces to facilitate their necessary international activities in a manner that meets provincial objectives and preserves the coherence of Canadian foreign policy. The federal government's foreign policy includes recognition of legitimate provincial interests beyond national borders and continued promotion of national unity through adequate international projection of Canada's bilingual character.

Provincial participation at international conferences and in the work of international organizations is provided for by including provincial officials on Canadian delegations and by canvassing provincial governments for their views on positions and attitudes that Canada adopts on subjects treated by these organizations. These include areas of particular interest to the provinces such as human and civil rights, education, culture, health, agriculture, labour and environment.

Other international interests of the provinces include promotion of trade, investment, industrial development, immigration, tourism, cultural exchanges, environmental questions, science and technology, bilateral and multilateral agreements, and assistance to developing countries. In matters of aid, the federal government encourages a detailed federal-provincial consultation to ensure that specific projects are co-ordinated. Promotional activities of the provinces and their interests in international activities have led to an increased number of provincial offices and visits abroad.

**Treaty-making powers.** The federal government has exclusive responsibility for Canada's external affairs. There are frequent consultations between federal and provincial governments regarding treaties of provincial interest and responsibility.

Once it has been determined that what a province seeks through agreements, in fields of provincial jurisdiction, is in accord with Canadian foreign policy, provision is made for direct provincial participation in negotiating with the authorities of the foreign country. Arrangements which are to be incorporated in an international agreement having legal effect, however, can be achieved only through the federal power to conclude treaties.

The external affairs department receives and analyzes diplomatic and consular reports and statistics, negotiates consular conventions and multilateral and bilateral agreements, monitors legislative developments which affect the status of Canadian citizens abroad, provides a link with other government services such as immigration, refugee matters and citizenship, trains foreign service personnel, provides instructions to posts abroad, recommends appointments of honorary consuls, evaluates services provided, manages Canada's immigration program abroad and co-ordinates external aspects of immigration policies and programs.

With the reorganization announced in January 1982, External Affairs Canada became directly responsible for the promotion of Canada's trade abroad. It is responsible for maintaining and furthering an international trading climate favourable to Canadian exporters and other economic interests and for policies and programs to safeguard and advance Canada's international trading interests. As the primary federal government contact with foreign governments and international organizations which influence trade, it consults with such governments and organizations and works closely with other federal government departments, Crown corporations and agencies, the provinces, and business and academic communities to achieve these objectives.

The trade commissioner service became part of the external affairs department in 1982, with 91 offices in 67 countries either directly in embassies and high commissions or in separate premises. Its primary role is to promote Canada's export trade and to protect Canada's commercial interests abroad.

External affairs also administers the policies of Tourism Canada abroad and provides advice on questions about consular activities.

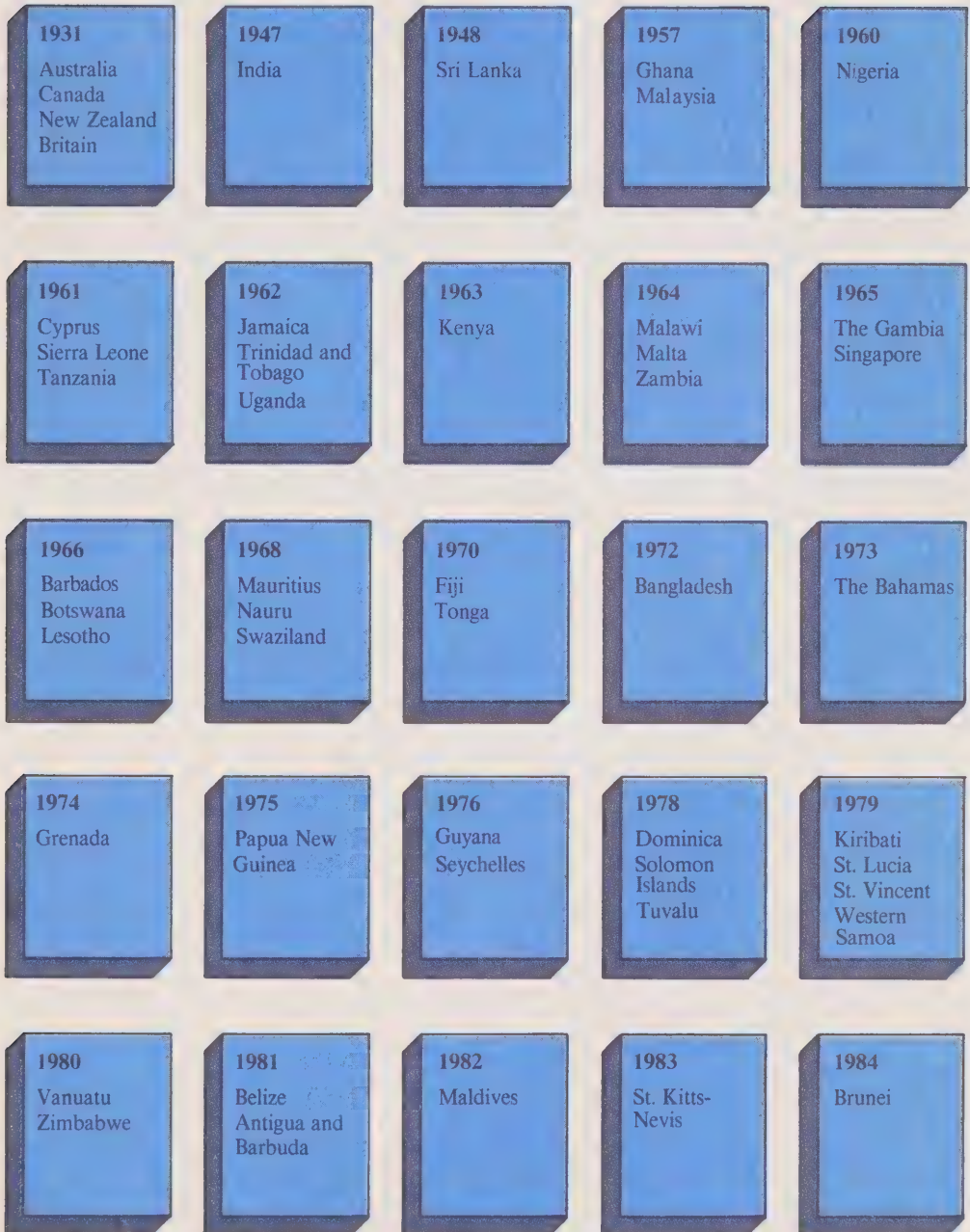
**Passport services.** Passports are issued to Canadian citizens through the main passport office in Ottawa and through regional offices in St. John's, Halifax, Montréal, Québec City, Toronto downtown and Toronto North York, Hamilton, London, Windsor, Winnipeg, Saskatoon, Calgary, Edmonton, Vancouver and Victoria. Abroad, the service is provided through Canadian diplomatic and consular posts. Certificates of identity are issued in Canada to eligible legally landed non-Canadians. United Nations refugee travel documents are issued in Canada to persons eligible under the UN refugee convention.

## 21.3 Multilateral activities

### 21.3.1 Canada and the Commonwealth

The Commonwealth has evolved into an international association of 49 sovereign nations embracing approximately one-quarter of the earth's surface and one billion of its people, who are diverse in race, colour, creed and language. Comprising both developed and developing countries, the Commonwealth represents a unique association whose members share many of the same traditions, political and social values, attitudes and institutions. All members collectively subscribe to certain common ideals known as the Declaration of Commonwealth Principles. Commonwealth membership is not an alternative, but a complement to other forms of international co-operation — its members believe in and work for the success of the United Nations. As well, most of them belong to other international organizations and to regional associations of states.

Chart 21.1

**Commonwealth countries**

Membership in the Commonwealth and pursuit of its work and goals are an important aspect of foreign policy. Canadian objectives have remained constant: to strengthen the association and its contributions to international peace and progress, and to assist its development as a vehicle for practical co-operation. The organization has no binding rules; decisions are by consensus rather than formal vote.

A Commonwealth secretariat in London organizes and services official Commonwealth conferences, facilitates exchanges of information between member countries and brings together their views. Canada pays its share of the budget of the secretariat and contributes to many other Commonwealth institutions and programs: a Commonwealth fund for technical co-operation, a Commonwealth youth program, a Commonwealth foundation, a Commonwealth scholarship and fellowship plan and the Commonwealth Games.

### 21.3.2 Canada and "la Francophonie"

The term "la Francophonie" generally describes 37 countries whose language is wholly or partly French. This term has also been used to designate a movement aimed at providing the French-language world with an organized framework and functional structures.

The federal government fosters the strengthening of ties with francophone countries. In the last few years relations with French-language countries of Europe, Africa and elsewhere have been considerably expanded and diversified.

Canada also participates in a multilateral organization, the Agency for Cultural and Technical Co-operation, and is a main contributor to its development program which has proved to be a successful tool of co-operation, especially for the African countries involved.

Canada is a member of the conference of ministers of education of French-language countries and of the conference of ministers of youth and sports of French-language countries.

The federal government is not alone in its efforts to draw francophone countries closer. On the bilateral level, the provinces take part in joint commissions and in the implementation of Canadian government aid programs. On the multilateral level, New Brunswick, Ontario, Manitoba and Quebec participate in some of the agency's activities. Quebec and New Brunswick have the status of participating governments in the agency's institutions, activities and programs.

Various non-governmental French-language associations also work to develop relations between their members around the world. The agency has helped and encouraged their activities. The Canadian government supports several that are either Canadian or have significant Canadian participation.

### 21.3.3 Canada and the OECD

The Organization for Economic Co-operation and Development (OECD) was established in Paris in

September 1961. It succeeded the Organization for European Economic Co-operation (OEEC) founded in 1948 by the countries of Western Europe to facilitate reconstruction of their war-shattered economies and to administer the Marshall Plan. In the OECD, Canada and the United States and later Japan, Australia and New Zealand joined with countries of Western Europe to form a major intergovernmental forum for consultation and co-operation among the industrialized nations.

The aim of the OECD is to facilitate the formulation of policy conducive to stability, balanced economic growth and social progress of both member and non-member countries.

The International Energy Agency (IEA), established within the framework of the OECD in 1974, plays a role in four main areas: emergency oil sharing, consultations on the oil market, promotion of the accelerated development of new sources of energy, and relations between oil consuming and oil producing countries. Another agency of the OECD, the Nuclear Energy Agency founded in 1972, has been involved in the co-ordination and exchange of views of the technical aspects of nuclear power.

The OECD brings together government officials and representatives of business, labour, universities and other non-governmental sectors at the international level. Representatives of provincial governments attend OECD meetings when subjects of particular interest to the provinces are being discussed.

### 21.3.4 Canada and the United Nations

Since the inception of the United Nations, support for the UN system has been an integral part of Canadian foreign policy. Canada has played a significant role in the general assembly, the security council and a number of its special committees. In 1984, the general assembly had 158 members.

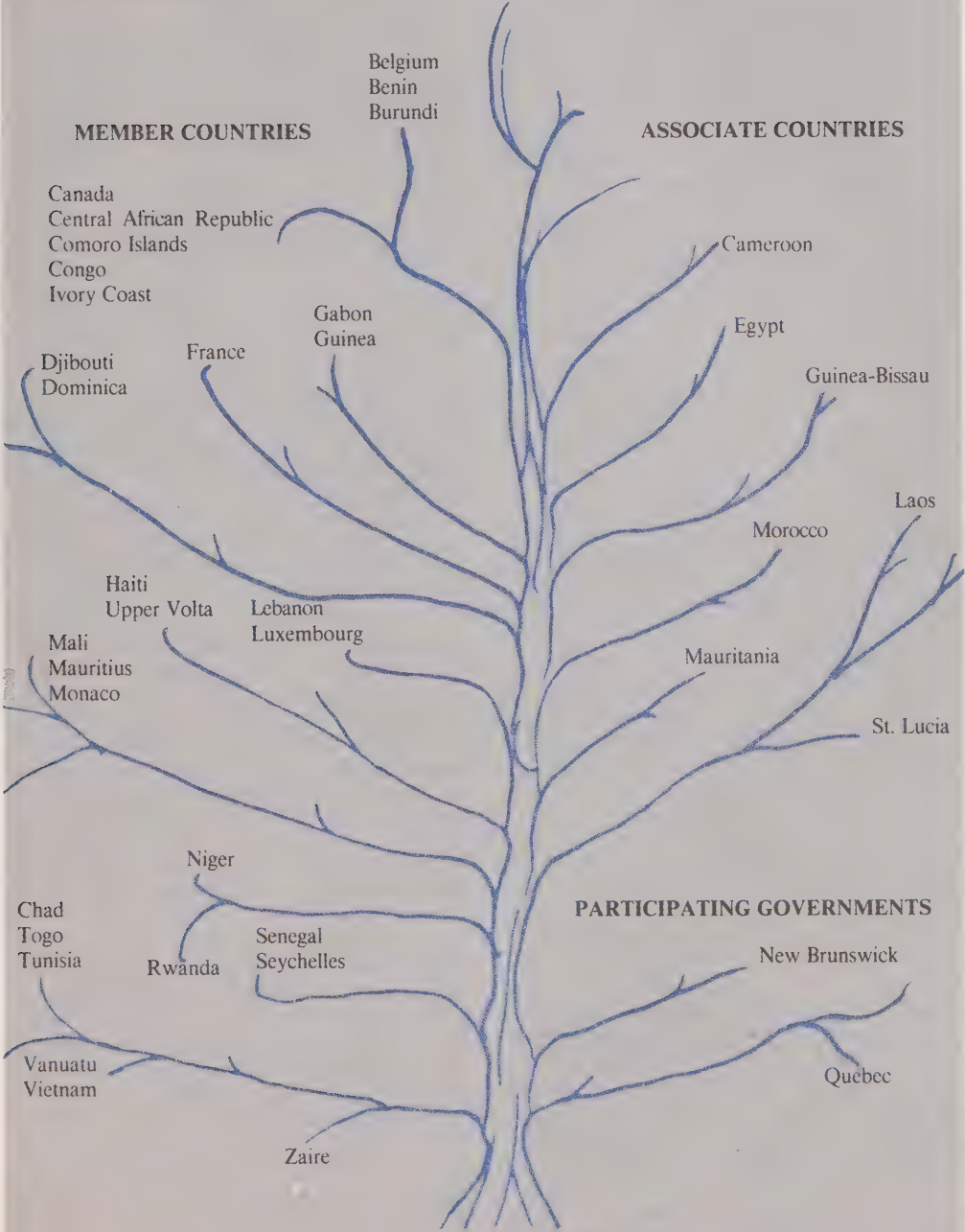
On the occasions when military personnel have been dispatched under the UN flag to deal with threats to peace and security, Canada has participated in providing personnel and equipment.

Canada has also served at regular intervals on the third principal organ of the UN, the Economic and Social Council. Generally, two sessions of the council are held annually, one in New York to discuss social and humanitarian questions, and one in Geneva to examine economic questions including food problems and international co-operation.

In recent years the UN has devoted more time to human rights, and new declarations, conventions and covenants have been promulgated. Canada has encouraged the preparation of such instruments and has stressed building better mechanisms for enforcement of standards.

Canada is a major contributor to the UN budget. Canada also makes voluntary contributions to the United Nations development program, the United

Chart 21.2  
**La Francophonie**



Nations high commission for refugees, the United Nations children's fund, the United Nations relief and works agency for Palestine refugees, the world food program, the United Nations institute for training and research, the United Nations educational and training program for southern Africa, the United Nations fund for population activities, the committee on racial discrimination, the trust fund for South Africa and the fund for drug abuse control. The United Nations development program is one of the largest of these, and has a team leadership function in co-ordinating development activities in the UN system.

**Canada and disarmament.** Canada is an active member of the various deliberative and negotiating international bodies concerned with disarmament. Since the reorganization of these bodies on the recommendations of the United Nations special session on disarmament (UNSSOD), more countries have become involved in the pursuit of arms control and disarmament. As a member of the conference of the committee on disarmament, Canada has a seat on the committee on disarmament (CD). This 39-nation body is the international negotiating forum for disarmament.

### 21.3.5 UN specialized agencies

Canada is a member of the specialized agencies of the UN, and is the host country of one, the International Civil Aviation Organization. Canada maintains permanent missions to the UN headquarters in both New York and Geneva, to UNESCO in Paris and the IAEA in Vienna. Canada also has accredited representatives to agencies located in Rome (FAO), Nairobi (UNEP) and Vienna (UNIDO).

**ILO (Geneva).** The International Labour Organization, established by the Treaty of Versailles, is one of the largest in budgetary terms of the specialized agencies. It strives to promote social justice by improving labour conditions and living standards. The ILO, in co-operation with management, labour and government, endeavours to establish minimum standards in such fields as social security, wages, hours of work, safety and worker compensation.

**FAO (Rome).** The Food and Agriculture Organization is one of the major specialized agencies. Its purpose is to raise levels of nutrition and improve production and distribution of food supplies from farms, forests and fisheries. The FAO carries out programs of technical assistance in nutrition and food-management, soil-erosion, reforestation, irrigation engineering, pest-control and the use of fertilizers.

**WHO (Geneva).** The World Health Organization is the largest of the specialized agencies in size of programs. To achieve its purpose of improving the health of the people of the world, WHO carries out programs of training and aid to equip countries to

improve their own health services. WHO also provides day-to-day information on major communicable diseases, such as cholera and yellow fever. It has also co-ordinated large-scale industrial research into heart disease and cancer.

**UNESCO (Paris).** The United Nations Educational, Scientific and Cultural Organization endeavours to promote international co-operation and understanding in the spheres indicated by its name. UNESCO carries out programs designed to increase facilities for education.

**ICAO (Montréal).** The International Civil Aviation Organization establishes international standards and regulations for civil aviation and promotes the development and planning of international air transport. It has been active in efforts to solve the problem of hijacking. Programs are carried out to improve safety, to simplify procedures for international air travel and transportation, and to aid countries in developing air networks.

**IMCO (London, England).** The Inter-governmental Maritime Consultative Organization, one of the smallest agencies in size of programs, facilitates the co-operation of governments in technical matters affecting shipping. IMCO promotes the highest levels of shipping safety and efficiency, and encourages the cessation of discriminatory actions and unnecessary restrictions by governments.

**ITU.** The International Telecommunications Union, oldest of the specialized agencies, is responsible for regulating, co-ordinating and planning international telecommunications in the fields of telephone, telegraphy and broadcasting. ITU co-operates with individual countries in developing telecommunications.

**WMO.** The World Meteorological Organization was established in 1950 to replace the International Meteorological Organization, formed in 1878. The WMO's primary function is to facilitate the international exchange of weather reports, to aid aviation and shipping, and to help countries establish meteorological services.

**UPU.** The Universal Postal Union is another agency dating from the last century. Its purpose is to promote the organization and improvement of postal services and to provide technical assistance as requested.

**WIPO.** The World Intellectual Property Organization is one of the newest of the specialized agencies, dating from 1974. It promotes the protection of intellectual property among states and in collaboration with other organizations, and ensures administrative co-operation among the unions previously established to protect intellectual property. The principal unions are the Paris Union (International Union for the Protection of Industrial Property), which dates from 1883, and the Berne Union (International Union for the Protection of Literary and Artistic Works), concluded in 1886.

**IAEA (Vienna).** Although usually treated as a *de facto* specialized agency, the International Atomic Energy Agency is in reality an independent intergovernmental organization under the aegis of the United Nations. The IAEA is empowered to enlarge the contribution of atomic energy to world peace, health and prosperity and, upon request, to apply safeguards to nuclear equipment and material to ensure that they are not diverted to non-peaceful uses. The IAEA has been given responsibility by the United Nations for applying the safeguards called for under the Treaty of the Non-Proliferation of Nuclear Weapons.

**GATT.** The General Agreement on Tariffs and Trade was the outcome of certain tariff negotiations and meetings of a preparatory committee that preceded an international conference on trade and employment proposed by a UN economic and social council resolution in 1946. The conference, held in Havana, was to adopt an international trade charter and constitute the International Trade Organization (ITO). Governments have been unwilling to ratify the Havana charter, and therefore the ITO has not been established. As a result, GATT has been administered by a secretariat on behalf of the Interim Commission of the International Trade Organization (ICITO). The agreement has four main reciprocal rights and obligations: trade should be non-discriminatory; domestic industries should be protected solely by tariffs; damage to trading interests should be avoided by consultation; in the framework of GATT tariffs should be reduced by negotiations.

**UNIDO (Vienna).** The United Nations Industrial Development Organization existed as an independent UN program since 1965. The second general conference of UNIDO in Lima in 1975 recommended specialized agency status. A constitution was concluded in April 1979. By achieving specialized agency status, UNIDO gained an improved ability to fulfil the objectives of promoting industrial development and helping to accelerate industrialization in the developing countries.

**IFAD.** Approval to set up the International Fund for Agricultural Development was given by a world food conference in Rome in 1974. The purpose of the fund, which is closely associated with FAO and the World Bank, is to improve agricultural production, in the broad sense including forestry and fisheries, by financing developing projects.

**Financial agencies.** Four financial organizations in the United Nations system have specialized agency status. The senior organization is the International Monetary Fund (IMF). The other three, the International Bank for Reconstruction and Development (IBRD) and its affiliates the International Development Association (IDA) and the International Finance Corporation (IFC) constitute the World Bank Group. Membership in the IMF is a

prerequisite for membership in the World Bank Group organizations.

Most members of the United Nations, including Canada, participate in these agencies. The main reason why some UN members do not belong is that the IMF requires certain reporting procedures concerning various elements of the balance-of-payments, as well as the gold and foreign exchange positions of its members. Furnishing such information has proved unacceptable to some UN members that have centrally-planned economies.

**IMF.** The work of the International Monetary Fund since its inception has been directed to facilitating the expansion and growth of world trade and payments as a means of raising world standards of living and fostering economic development. The fund is intended to promote and insure stability and order with respect to exchange rates, as well as to establish mechanisms for balance-of-payments assistance that will enable member countries to correct temporary imbalances with a minimum of disturbance to the international monetary system and their economic development programs. Its assets are available for providing short- and medium-term financing to both developed and developing member countries. Given disturbances in exchange markets in recent years, the floating of some major currencies and increased divergence of payments positions between countries, the fund has placed increasing emphasis on its role as a centre for international co-operation and consultation. The fund also constitutes an important source of economic advice and technical assistance to developing countries.

**IBRD.** The International Bank for Reconstruction and Development, with its two affiliates, is empowered to extend loans and credits to all member countries, especially those in the Third World, for projects that bank studies have indicated will make an important contribution to the borrower's economic development. The three organizations differ essentially in the source of their funds and the terms of their loans. The IBRD obtains most of its funds from bonds issued on world capital markets and must, accordingly, lend on competitive terms.

**IDA.** The International Development Association relies on interest-free advances from governments for the bulk of its resources, and makes loans on highly concessional terms.

**IFC.** The International Finance Corporation seeks to promote the growth of productive private enterprise in developing member countries by facilitating loans on competitive terms without government guarantee.

### 21.3.6 International environment programs

Canada belongs to a 17-member international council for exploration of the sea which encourages and co-ordinates studies of marine environment with particular reference to living resources in the North

Sea and North Atlantic. Canada is also a member of 10 international fisheries commissions which investigate specific living marine resources in defined areas.

Canada participates in an international program set up under UNESCO to facilitate a better scientific understanding of hydrological phenomena and in an operational hydrological program set up under WMO.

The WHO designated the Canada Centre for Inland Waters (CCIW) at Burlington, Ont. as its international collaboration centre for surface and groundwater quality. Canada has also been active on the marine environment protection committee of the IMO.

Canada signed the final Act of the Conference and the Law of the Sea Convention at Montego Bay, Jamaica in December 1982. Among other environmental processes, Canada was able to secure international recognition of Canadian environmental legislation for Arctic waters through the convention.

Canada contributes to the environment fund of the United Nations Environment Program, the only multilateral intergovernmental body established solely to deal with global and regional environmental issues. It is essentially a co-ordinating body. Its work program includes global environmental monitoring and assessment studies of climate, the atmosphere and ozone layer; a scientific information exchange and an international register of potentially toxic chemicals; and activities in such areas as encroaching deserts, soils, water, living resources, environmental law, human settlements and human health, ecosystems, environment and development, oceans, energy and natural disasters.

Canada participates in activities of the senior advisers on environmental problems, a principal subsidiary of the UN Economic Commission for Europe (ECE). Projects included are long-range transport of air pollutants, environmental impact assessment and environmental indicators. Canada also contributes to the committee on water problems, another ECE subsidiary body.

As a member of the international co-ordinating council of the UNESCO program on man and the biosphere Canada has been influential in injecting four social science concerns: urbanization and industrialization, agricultural and forestry management practices, coastal ecosystems, and Arctic and isolated area development.

The OECD has an environment committee to examine common problems. The areas most pertinent for Canada are chemicals, state of the environment, economies of environment, energy, air and toxic wastes.

As a member of the World Weather Watch, Canada has set up nine stations of a planned network of 11 for monitoring air pollution in non-urban areas.

## 21.4 Activities by region

### 21.4.1 The United States

There is no more important external relationship for Canada than that with the United States. Because of geography and economic and social patterns, the two countries have developed extensive mechanisms to deal with an extremely wide range of policies and programs. Besides informal consultations, there are official and technical committees in which Canadian and US officials discuss defence and transboundary environmental matters. The International Joint Commission, an independent agency, was established by the US and Canada in 1909. It deals with regulation of flows of boundary waters and the abatement of transboundary air and water pollution. Canada and the US have a long history of defence co-operation through a permanent joint board on defence through the North American Air Defence (NORAD) and through the North Atlantic Treaty Organization (NATO).

In trade, Canada and the United States are each other's best customer. Usually, Canada sells to the US about 70% of all exports and buys from the US about 20% of all US exports.

### 21.4.2 The Caribbean

Canada has long enjoyed close relations with the countries of the Commonwealth Caribbean. In 1979 Canada signed a trade and economic agreement with the countries of the Caribbean Commonwealth market (CARICOM). At the Commonwealth heads of government meeting in St. Lucia in February 1983, Canada reaffirmed its commitment to the Commonwealth Caribbean as a priority region for Canadian aid and development.

### 21.4.3 Latin America

In addition to maintaining diplomatic relations with all Latin American countries through resident missions with dual or multiple accreditation, Canada is associated with the inter-American system through observer status in many inter-American institutions including a permanent observer mission to the Organization of American States in Washington, DC.

Trade is a major feature of contemporary Canadian relations with Latin America. Exports to, and imports from the Latin American region have risen in recent years, although problems in the economies of such countries as Mexico, Brazil and Venezuela have had a dampening effect on Canadian exports to those areas. Canada has developed industrial and technical co-operation agreements with countries of the Latin American region. Venezuela is the leading supplier of oil to Canada, and the volume of oil imported from Mexico has increased markedly in the 1980s.

### 21.4.4 Europe

Canada's cultural and social ties with Western Europe and shared commitment to its security

through membership in NATO have been strengthened in recent years through economic, trade and commercial relations. This development has taken place in parallel with the growth of the European Economic Community (EEC), which has become the world's largest trading entity.

Western Europe is an area of major importance to Canada in all matters: political consultations, security, co-operation in development, science, technology, communications, cultural exchanges, tourism, immigration and many others.

Canada and the Eastern European states have in recent years maintained links for trade, scientific and technological co-operation as well as cultural and sports exchanges. Main trade clients in this region have been the Soviet Union, Poland, Yugoslavia and Czechoslovakia.

#### **21.4.5 The Middle East**

In recent years, Canada has increased the number of its diplomatic missions in the Middle East in response to the area's growing significance in trade, industrial development and political activity. Despite unsettled conditions in some areas, Canada has consistently attempted to follow a policy of balance and objectivity between the parties to the Arab-Israeli dispute.

Many of the major oil-exporting countries of the Middle East have put their increased revenues to use by expanding their developmental projects. In addition, some have sought to employ a part of their surpluses in assisting other countries that lack such valuable resources. These countries are becoming more aware of Canada's potential as a reliable supplier not only of traditional but also of more sophisticated goods and services. Saudi Arabia is one of Canada's largest markets in the area.

#### **21.4.6 Africa**

Direct relations were established with former British colonies in Africa as they became independent members of the Commonwealth. Increasing contacts and diplomatic relations with the newly independent French-language African states soon followed. Canada now maintains diplomatic relations with almost all the independent African states through resident Canadian missions in several countries, most of them having dual or multiple accreditation. The development of diplomatic and commercial relations has been accompanied by a significant and growing program of Canadian development assistance to Africa. There has also been growth in trade, technical assistance and cultural exchanges.

#### **21.4.7 Asian and Pacific region**

Japan is Canada's second largest national trading partner. Over the past decade vigorous efforts have been made to enhance the Canada-Japan relationship. A framework for economic co-operation and a cultural agreement provided mechanisms through

which these efforts have been channelled. Contacts across the broad front of political, economic, cultural, academic and media relations have intensified to the advantage of both nations.

China's modernization plans provide substantial opportunities for the development of increased export trade from Canada. China has embarked on an unprecedented program to attain equality with the industrialized countries. This aspect of Canada-China relations was highlighted by the January 1984 visit to Canada by China's Premier, Zhao Ziyang. Canada was among the first of the western democracies to officially recognize the People's Republic of China. Cultural and scientific exchanges with China continue apace, and Chinese scholars are admitted for advanced training at selected institutions in Canada.

Canada-Korea relations have continued to develop in parallel with the growth of the Korean economy. Trade between these two countries increased by large percentages in recent years.

Canada's bilateral relations with the individual countries of South East Asia feature both development assistance and commercial interest. A further dimension has been added in the evolution of Canada's relationship with the Association of South East Asian Nations (ASEAN). Indonesia, Singapore, Malaysia, Thailand, the Philippines and recently Brunei have, through their participation in ASEAN, indicated an increased willingness to co-operate for their mutual benefit. In formal meetings with ASEAN representatives since 1976 Canada expressed interest and support for this organization in its efforts to promote broad regional development and increase stability in the area. A joint co-operation meeting took place in 1983, with another scheduled for 1984. ASEAN post-ministerial meetings are held each year for discussions on items of mutual interest.

Relations with Australia and New Zealand are deeply rooted in similar institutional, legislative and judicial experience as well as in shared problems and common action over several generations. More recently, new and rapidly developing mutual interests have arisen over a wide range of government activity including domestic issues, the export of uranium and nuclear safeguards, the exploration and marketing of raw materials and multilateral trade questions. Trade with Australia and New Zealand is mostly in manufactured goods.

India's gathering economic strength and geopolitical significance are factors in the formulation of Canadian foreign policy in Asia. Pakistan, Bangladesh and Sri Lanka have received substantial Canadian support in aid and developmental projects. Fundamental to the pursuit of specific Canadian policy concerns is the continuing political dialogue with countries in the area.

## 21.5 International trade

### 21.5.1 Summary

The value of imports decreased 14.6% in 1982 (Table 21.2), the first decrease since 1970 when imports declined 1.3%, but rose 11.4% in 1983 to \$76.0 billion, according to statistical data compiled from customs documents (customs basis). In the period between 1979 and 1983, the value of imports increased an average of 9.4% annually. The pace of growth of the value of exports slowed from an increase of 23.4% in 1979 to one of 0.9% in 1982, and increased 7.6% in 1983 to \$91.0 billion (customs basis). In the period 1979-83, the value of exports increased an average of 11.6% annually.

Canada was among the few OECD countries which had a favourable merchandise trade balance. This arises when a country's merchandise exports exceed its merchandise imports. In the period between 1979 and 1983, Canada's favourable merchandise trade balance rose from \$2.8 billion to \$15.4 billion (customs basis). Trade balances are also available on a balance-of-payments basis, reflecting adjustments for valuation, coverage and timing applied to customs data to make them consistent with the concepts and definitions used in the system of national accounts.

A significant part of the increases in the value of imports and of exports was attributable to price inflation. The import price index at the total level, current-weighted, showed increases which averaged 14.0% annually in 1979, 1980 and 1981 (Table 21.8). Prices further increased 1.7% in 1982 and then decreased 3.6% in 1983. Domestic export prices, at the total level, current-weighted, increased strongly in the early part of the review period when prices rose 20.9% in 1979 and 17.2% in 1980. Domestic export prices rose 0.5% in 1982 and decreased 1.3% in 1983.

A measure that indicates changes in imports and exports in real physical terms with the impact of price changes removed is the fixed-weight volume index (Table 21.8). The index of the volume of imports in 1983 was 5.6% lower than its peak in 1979 when it registered an increase of 10.8%. The index of the volume of domestic exports increased an average of 2.6% annually in the period 1979-83 with most of the increase occurring in 1983.

### 21.5.2 Trade by commodity groups, 1979-83

**Imports.** End products, inedible (such as commodities commonly regarded as articles, for example automobiles) were the leading imports, accounting for 64.0% in value of total imports in 1983 (Table 21.3), followed with a share of 18.5% by fabricated materials, inedible (such as commodities which have undergone preliminary stages of processing, but which will be subjected to further processing, for example metal ingots). Crude materials, inedible had a 9.5% share in value of total imports and food, feed, beverages and tobacco had a 6.4% share. Automotive

products formed the single most important imports group with a share ranging from a low of 19.5% in 1980 to a high of 25.6% in 1983 of the value of total imports. Imports of industrial machinery and of agricultural machinery both decreased, while office machinery and communications equipment imports rose in the 1979-83 period. The value of imports of fabricated materials was 16.5% higher in 1983 than in 1979, with chemicals and petroleum products making substantial gains. Imports of crude petroleum reached a record in 1980 and in 1981 when they accounted each year for 10.0% of the total import bill, but had declined to about 4.0% of the total value of imports by 1983.

**Exports** of automotive products totalled \$21.4 billion or 24.2% of domestic exports in 1983, up from \$11.9 billion or 18.5% of the total value of domestic exports in 1979 (Table 21.4). Agricultural machinery recorded a significant drop with exports in 1983 lower than in 1979. Exports of industrial machinery increased and peaked in 1981. Lumber, wood pulp as well as iron and steel products registered slow growth. Exports of petroleum products, chemicals and non-ferrous metals increased an average of 13.0% or more a year in this period. Both crude petroleum and natural gas showed increases, but exports of metal ores and concentrates declined. The value of wheat exports posted gains, as a result of improved export prices, mainly in 1979 and in 1980, and of higher export volume which rose an average of 11.1% annually in the period 1979-83.

**Principal trading areas.** The principal trading areas shown in some tables include groupings which are defined as follows: other EEC — Belgium, Denmark, France, Federal Republic of Germany, Ireland, Italy, Luxembourg, the Netherlands and Greece (the UK is also a member of the EEC but is shown separately because of the importance of its trade with Canada); other OECD — Austria, Finland, Iceland, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, Australia and New Zealand (the EEC countries, United States, Japan and Canada are also members of OECD); other America — defined as all countries and territories of North and South America (other than the United States and Canada) including Greenland, Bermuda and Puerto Rico.

### 21.5.3 Imports and exports by country

**Imports** from all countries increased by 11.4% or \$7.7 billion in 1983 over 1982 (Table 21.5). Imports from the United States rose \$6.2 billion in 1983 over 1982. Imports from Japan, other EEC countries and other countries were up while imports from the United Kingdom decreased. The United States was the source of 71.6% or \$54.1 billion of Canada's imports in 1983. The US share fluctuated from a high of 72.5% in 1979 to a low of 68.6% in 1981 of total imports. The UK share and that of the other EEC countries decreased in the 1979-83 period.

Japan's share increased from 3.4% in 1979 to 5.8% in 1983. Imports from other countries reached a high of 18.1% of total imports in 1981 but decreased to 14.7% in 1983, the decline in imports of crude petroleum being a significant factor.

**Exports** to all countries in 1983 increased 7.6% or \$6.4 billion over 1982. Exports to the United States rose 15.0% or \$8.6 billion. Exports to Japan were up about 4.0% or \$0.2 billion. Exports to the United Kingdom decreased by \$0.2 billion, to other EEC countries declined by \$0.5 billion and to other countries were down by \$1.6 billion. The US share of Canada's exports increased from 67.8% in 1979 to 72.9% in 1983, the highest share recorded in the last 35 years. The shares of the United Kingdom and other EEC countries decreased. Japan's share was 5.2% in 1983, down from 6.2% in 1979. Canada's exports to other countries amounted to \$13.0 billion, or 14.3% of total exports, down from 18.4% in 1980.

#### 21.5.4 Reconciled data of trade with the United States

After adjusting for conceptual differences which normally add to the balance calculated from Canadian data, the reconciled trade surplus with the United States measured US\$9.7 billion in 1982, up substantially from the reconciled trade surplus of US\$0.6 billion in 1979 (Table 21.7). The large increase in the trade surplus was due mainly to a 14.6% decrease in imports from the United States in 1982.

#### 21.5.5 Statistics and definitions

Canada's external trade statistics are tabulated from copies of administrative documents collected by customs offices at ports across Canada. The Customs Act requires that each time goods are imported into or exported from Canada a document be filed with customs giving such descriptions of the goods and details of the transaction as are required for customs administration. It follows that the method of compilation of external trade statistics is determined and limited to some extent by customs regulations and procedures.

Statistics on trade in electricity and on exports of crude petroleum and natural gas are collected by Statistics Canada.

**Concepts and definitions** used in the compilation of external trade statistics are published in *Summary of external trade* (Statistics Canada 65-001). Among them are the following:

**System of trade.** Canadian statistics are tabulated according to the general system of trade. Thus imports include all goods which have crossed Canada's geographical boundary, whether they are entered through customs for immediate use in Canada or stored in bonded customs warehouses. Domestic exports include goods grown, extracted or manufactured in Canada (including goods of foreign

origin which have been materially transformed in Canada). Re-exports are exports of goods of foreign origin which have not been materially transformed in Canada (including goods withdrawn for export from bonded customs warehouses).

**Coverage.** Merchandise trade includes only goods which add to or subtract from the stock of material resources in Canada as a result of their movement across the Canadian border.

**Valuation.** The theoretical requirement is that values of exports should reflect f.o.b. (free on board) selling price at the place of production (a mine site or factory). Transportation and other costs from the place of production to the ports of export should be excluded. In practice, the values recorded from some export transactions include transportation costs to the ports of export or to the final destinations. Export values of automotive products reflect intercompany transfer price.

Values recorded for imports should be based on f.o.b. selling price at the place of production (a mine site or factory) in the country of export. Measures are taken to conform to this requirement for import shipments, each of \$100,000 or more. But these measures are not extended to import shipments each valued at less than \$100,000 and which may thus include transportation and other costs. Values recorded for import transactions between affiliated companies and each valued at less than \$100,000 reflect fair market values, the wholesale values of imports in the country of export. Values of import transactions are sometimes reassessed by Customs; the reassessed values of such import transactions are recorded if they are each valued at less than \$100,000. However, such reassessing occurs infrequently. Imports of automotive products from the United States are recorded at values based on the intercompany transfer price.

**Trading partner attribution.** Imports are attributed to the country from which the goods were first consigned directly to Canada, whether or not this is the country of origin. An exception is made for goods from Central or South America consigned to Canada from the United States; such imports are credited to the country of origin.

Exports are attributed to the country which is the last known destination of the goods at the time of export. (Many primary products are shipped to entrepôt points, particularly in Europe, for re-export to the ultimate destination which is unknown when the goods leave Canada.) The country classification employed by Statistics Canada is designed for purposes of economic geography and therefore does not reflect the views or intentions of the federal government on international issues of recognition, sovereignty or jurisdiction.

**Reconciliation.** Because of differences in concepts and collection procedures, Canada's trade statistics

rarely agree with the counterpart statistics of its trading partners. Conceptual differences are most common in statistical treatment of special categories of trade such as military supplies, government-financed gifts of commodities, postal and express shipments, tourist purchases, bunker and warehouse trade, in the definition of territorial areas, and in the system of crediting trade by countries. Differences in collection procedures lead to discrepancies in valuation, since the value of trade can be based on customs value, transaction value, or fair market value with or without the inclusion of transportation charges; in timing, since the definition of a statistical month or year can differ; and in the capture of trade data, since the documentation of export trade tends to be less closely monitored than import trade. The United States and Canada have agreed on concepts and definitions describing a framework within which it has been possible to reconcile differences in trade statistics published by the two countries.

**Indexes of price and volume.** The price indexes in Table 21.8 are current-weighted and are calculated from price relatives based on 1971 = 100. The weights are trade quantities for the month, quarter or year to which the index refers and hence change from period to period. The volume index is derived by dividing a value index by the corresponding current-weighted price index. The resulting volume index is, therefore, weighted with fixed 1971 price weights. The price indicators selected are either commodity unit values calculated directly from the trade statistics or, particularly in the case of end products, price indexes obtained from other Canadian or foreign statistics.

An explanation of the methodology used to construct the indexes is contained in a reference paper entitled *The 1971-based price and volume indexes of Canada's external trade*, published in December 1976 as a supplement to *Summary of external trade* (Statistics Canada 65-001).

## 21.6 Federal trade services

Canada's economy is vitally dependent on international trade. Competition among industrial nations is intense and increased exports are not easy to achieve. A successful export trade development program can only be assured by combining good products, efficient production and aggressive, intelligent marketing with government support.

Federal government support for Canadian exporters is provided through the External Affairs Canada programs: program for export market development (PEMD), promotional projects program (PPP) and the Export Development Corp., a Crown agency which reports to Parliament through the minister of international trade.

### 21.6.1 Department of External Affairs

**The economic and trade policy division** has an ongoing responsibility to apply economic analysis to current export policy issues, and at the same time give full consideration to long-term export policy. It provides support and advice regarding international trade relations. International economics and industrial development are analyzed with emphasis on their significance for the Canadian economy and medium-term economic policy. Canada's situation is studied in terms of world economic development and trade policy options.

**The GATT affairs division** includes a general trade policy bureau and a commodity trade policy branch, responsible for formulating and implementing Canadian trade policy with particular reference to the activities of the General Agreement on Tariffs and Trade (GATT), the Organization for Economic Co-operation and Development (OECD), the United Nations Conference on Trade and Development (UNCTAD) and the trade aspects of domestic industrial and agricultural policies. It is also responsible for commodity trade policy questions generally and in particular the preparation and conduct of the negotiation of intergovernmental commodity arrangements and agreements.

**An export marketing bureau** provides a focus for the management of international marketing efforts. The bureau is responsible for developing and monitoring export marketing plans and strategies. The bureau serves as the secretariat for the Export Trade Development Board, established in 1981 to review recommendations regarding trade development programs and policies.

**A trade relations bureau** implements government policies relating to low-cost imports. Import controls divisions of this bureau are responsible for the control of imports of textiles and clothing (division I) and agricultural, footwear and all other products (division II).

**The five international branches** (Europe, Asia and Pacific, Africa and Middle East, Caribbean and Central America, and the United States) each headed by an assistant deputy minister, are focal points on matters affecting Canada's trade and economic relations with other countries and areas. Branch responsibilities include development of Canada's international trade strategy, market development programs for individual countries and areas and improvement of access for Canadian products to export markets. The branches are centralized sources of information on Canada's trade with specific countries or regions and they provide a regional perspective for matters of both international trade relations and export trade development. They also provide information, advice and guidelines to government agencies and to the business community

on foreign government trade and economic regulations and practices; maintain contact, normally through Canadian posts abroad, with foreign markets and foreign governments on matters pertaining to markets for Canadian exports; and provide advice to the department, to other Canadian government agencies and to the Canadian business community on export market problems and opportunities.

**The trade commissioner service** promotes Canada's export trade and represents and protects its commercial interests abroad. Accordingly, a trade commissioner has a variety of responsibilities: to act as an export marketing consultant; to bring foreign buyers into contact with Canadian sellers; to help organize trade fairs and trade missions; to recommend modes of distribution and suitable agents; and to report on changes in tariffs, exchange controls and other matters affecting Canada's trade with the countries to which he or she is accredited. A trade commissioner initiates programs to develop new markets for Canadian products, responds to inquiries from Canadian firms and provides advice to the visiting Canadian exporter.

The scheduled return of trade commissioners for official tours of Canada helps Canadian firms interested in the export trade. Trade associations are informed in advance of these visits so that business persons wishing appointments may arrange them through one of the 15 regional offices of the department of regional and industrial expansion. These offices are the primary links between the business community and trade commissioner service posts abroad.

**The grains marketing bureau** is concerned with federal government activities in marketing assistance and industrial development for grain, oilseeds and their bulk derivatives. It contributes to overall grain production, transportation and marketing policy formulation and works closely with the Canadian Wheat Board on grain sales and promotion programs (see Chapter 9, Agriculture). Among these programs are the grain credit sales and prairie grain advance payments. The office also administers programs designed for more specific applications such as a canola utilization assistance program and a freight assistance program for canola products. The office participates in the activities of international organizations concerned with grain and oilseeds such as the International Wheat Council and the Food and Agriculture Organization of the United Nations.

**A trade fairs and missions bureau** administers a program of promotional projects which are initiated and implemented by the department. This includes participation in international trade fairs, solo shows and in-store promotions overseas; organizing technical seminars and incoming and outgoing trade missions; and sponsoring foreign visits to Canada to

stimulate the sale of Canadian products and services in various export markets.

**A defence programs bureau** promotes defence export trade through marketing programs aimed at the sale of Canadian defence and defence-related high technology equipment to the United States, to NATO and other friendly countries. It makes arrangements for co-operative industrial research, development and production in defence-related matters. The American defence department is not obliged to comply with the Buy American Act in purchasing Canadian defence products.

**Tourism program abroad.** External Affairs is responsible for the delivery of the tourism program through personnel at posts abroad. In 1982, tourism expenditure in Canada totalled over \$17.6 billion. This expenditure represented slightly over 5% of Canada's gross national product, provided direct and indirect employment for over one million Canadians, provided \$8.0 billion in government revenue and induced over \$2.5 billion in investment. Of the total \$17.6 billion, \$3.8 billion or 22% represented earnings from foreign visitors. It is this portion of the program that External Affairs is responsible for delivering.

#### 21.6.2 Export Development Corp. (EDC)

EDC is a Crown corporation that provides insurance to exporters, guarantees to banks and financing to foreign buyers of Canadian capital goods and services to develop Canada's export trade. The corporation is required by legislation to operate on a self-sustaining basis. To benefit from its services, Canadian exporters must compete in foreign markets on the usual commercial criteria of price, quality, delivery and service. To qualify for EDC support, exports must have a Canadian content of at least 60%. All goods and services are eligible for EDC export credits insurance but only capital goods normally sold on credit terms of two years and more are eligible for financing support. Anyone carrying on business in Canada is eligible for EDC support.

**Export credits insurance** protects exporters for up to 90% of their losses if their foreign customers are unable or unwilling to pay their bills. The most widely used policy is global comprehensive, which provides protection against both political and commercial developments. Political developments include war or revolution or foreign exchange blockages, and commercial developments include insolvency or repudiation. Global political insurance is similar to global comprehensive but without the commercial coverage. Selective political insurance covers exports to specified countries for political risk. Global policies cover exports sold on short-term credit. For exports sold on medium-term credit of two to five years, EDC provides specific transaction insurance, which covers individual transactions. It also provides specific transaction guarantees to banks

providing supplier credit for medium-term transactions.

**Export financing** supports sales of capital goods and services sold on medium- or long-term credit of more than five years. On long-term transactions, EDC lends direct to the foreign buyer. On medium-term sales, it uses two types of lending, note purchases (including forfeiting) and allocations under lines of credit. Note purchases involve the purchase by EDC of a promissory note given to a Canadian exporter in payment by a foreign buyer. In some cases, the note must be guaranteed by a bank acceptable to EDC. Lines of credit are a special kind of lending in which EDC lends to a bank or financial institution in another country, which re-lends to the buyer. Since rates and terms have been prenegotiated, the transaction moves forward with a minimum of delay. In all cases, the exporter gets what amounts to a cash sale and his buyer gets financing. EDC also provides loan guarantees to banks which provide buyer financing for exports of Canadian capital goods and services. Examples of products financed by EDC are subway cars, airplanes, turnkey construction projects, electronics equipment, ships, manufactured goods, machinery and flight simulators.

**Performance security insurance** protects an exporter against the wrongful call of a performance security he has posted in connection with an export sale. Performance security guarantees protect banks against wrongful calls of performance securities they have posted on behalf of exporters. Bid security guarantees cover banks providing bid securities on behalf of exporters. Consortium insurance protects members of an exporting consortium against a rightful call of a performance security when the other members of the consortium are unable to pay their shares. Surety bond insurance protects a domestic surety company which provides a performance bond to a foreign buyer.

Foreign investment insurance protects Canadian investors against three risks — expropriation; war, revolution or insurrection; and inability to repatriate earnings. To qualify, the investment must be of benefit both to Canada and the host country.

### 21.6.3 Tariffs rates

The customs tariff sets out five different tariff treatments: the British preferential, most-favoured-nation, general, general preferential, and United Kingdom and Ireland. The special arrangements for the United Kingdom and Ireland will disappear on January 1, 1987, when those countries will be granted most-favoured-nation treatment.

**General tariff rates** are applied to goods imported from countries with which Canada has no tariff arrangements, such as, Albania, Balau Islands, North Korea, Libya, Oman and Saudi Arabia. The German Democratic Republic, once subject to general tariff rates, is now entitled to most-favoured-nation rates.

Also, the general tariff rates apply unconditionally to goods imported when the country of origin cannot be determined.

**Most-favoured-nation rates** are tariff rates fixed by Parliament as being more favourable than the general tariff. These rates reflect Canada's international tariff arrangements such as GATT or specific bilateral trade agreements. These rates apply conditionally to those goods for which most-favoured-nation treatment is claimed.

**The British preferential tariff rates** are fixed by Parliament and offer more preferential (lower) rates of duty than the most-favoured-nation rates to commodities of British countries or any other British colony or protectorate or territory under British trusteeship. South Africa is entitled to most-favoured-nation rates rather than British preferential rates. Furthermore, some of these countries, such as Australia, are offered through bilateral trade agreements a preferential tariff rate lower than the British preferential on certain specified goods.

**General preferential tariff rates** are formula based rates and reflect, since July 1974, Canada's international commitment to developing countries under a generalized system of preferences. The formula, as established by Parliament, generally provides for a margin of preference to be either equivalent to the British preferential tariff rate or one-third of the most-favoured-nation rate.

**The United Kingdom and Ireland tariff rates** are formula based rates and reflect Canada's decision to terminate by 1987 the preferential tariff rate extended to the United Kingdom of Great Britain and Northern Ireland, the Channel Islands, the Isle of Man and the Republic of Ireland. The phasing out of these preferences started in January 1980 with the gradual elimination of the established margin of preference in accordance with prescribed rules set out by Parliament.

In all five tariff treatments, goods are subject to various rates of duty including a free rate of duty.

**Value for duty.** In general, the Customs Act provides that the value for duty of imported goods shall be the fair market value of like goods in the home market of the exporter at the time and place from which the goods are shipped directly to Canada when sold to purchasers with whom the vendor deals at arm's length and who are at the same trade level as the importer, and in substantially the same quantities for home consumption in the ordinary course of competitive trade. Where like goods are not sold for home consumption and in a few special cases, other methods are used to determine the value for duty. Ordinarily it may not be less than the amount for which the goods were sold to the purchaser in Canada, exclusive of all charges after their shipment from the country of export.

**Anti-dumping Act.** Canada's Anti-dumping Act provides, in general, that where goods are dumped (the export price is less than the normal value) and such dumping causes material injury to the production of similar goods in Canada, or retards the establishment of production in Canada of similar goods as determined by the Anti-dumping Tribunal, there shall be an anti-dumping duty. The amount of this duty is equal to the margin of dumping of the entered goods.

**Drawback.** Drawback legislation is designed to provide relief from customs duty and sales tax included in the manufacturers' costs to enable them to compete more equitably both abroad and at home with foreign manufacturers. It does this by granting a drawback, in the case of Canadian exporters, of customs duty and sales taxes paid on imported parts or materials used in Canada in the manufacture of goods subsequently exported. In certain strategic industries in Canada (aircraft, automobiles and other secondary manufacturers) costs of plant equipment or key materials are reduced in the same manner when specified imported goods are used in eligible Canadian manufacturing. Other areas where drawbacks are payable include: ships stores; joint Canada-US projects; and imported goods exported or destroyed in Canada.

#### 21.6.4 Trade agreements

Canada's tariff arrangements with other countries fall into three main categories: trade agreements with a number of Commonwealth countries; the General Agreement on Tariffs and Trade (GATT); and other arrangements.

Canada signed the protocol of provisional application of the General Agreement on Tariffs and Trade in October 1947 and brought the agreement into force in January 1948. The agreement provides for scheduled tariff concessions and the exchange of most-favoured-nation treatment among the contracting parties, and lays down rules and regulations to govern the conduct of international trade.

Trade relations between Canada and a number of other countries are governed by trade agreements of various kinds, by exchange of most-favoured-nation treatment under orders-in-council, and by even less formal arrangements. Details are available from the appropriate international bureaus of the external affairs department.

## 21.7 Canadian development assistance programs

### 21.7.1 Canadian International Development Agency (CIDA)

CIDA is responsible for operating and administering most of Canada's international development assistance programs. In the fiscal years 1978-79 to 1982-83 inclusive Canada spent \$6.9 billion on

international development co-operation, an average of about \$1.4 billion for each of the five years. Of the total, about \$3.1 billion went to bilateral (country-to-country) development programs, \$2.6 billion to multilateral assistance programs and \$1.1 billion to a variety of other programs, including contributions to assist the work of Canadian and international non-governmental organizations and incentives to encourage the Canadian private sector to invest in developing countries, as well as funding for the International Development Research Centre (IDRC), for Petro-Canada International Assistance Corp., for international relief and for various scholarships.

CIDA's bilateral program assists selected developing countries in Asia, Africa and the Americas with many types of development projects, including various forms of technical assistance. In 1982, a total of 869 Third World students and trainees studied in Canada and 752 students and trainees studied in their home country or in another developing country under CIDA awards. In addition, 593 Canadian advisers were on assignment abroad under CIDA arrangements during 1982.

Canadian bilateral assistance is financed through non-repayable grants or development loans. Most loans are extended for 50 years, usually without interest, with no repayment required for the first 10 years; a few are offered for 30 years, with 3% interest and seven years' grace before first payment. To ease the debt burden on countries designated least-developed by the United Nations, Canada decided in 1977 to forgive their past loans and has since provided all aid to them in grants.

The Asia bilateral program is Canada's oldest: since 1951 it has provided about \$4 billion in aid, mostly to Bangladesh, India, Pakistan, Indonesia and Sri Lanka. Food aid and infrastructure (dams, power transmission and transportation) were predominant in earlier years but more recently a new generation of projects has emerged that emphasizes rural development. Priority in future will go to agriculture and social development.

In bilateral assistance over the past two decades, francophone Africa and anglophone Africa have together received more than \$3 billion in Canadian aid.

In francophone Africa CIDA's efforts have included projects in such fields as irrigation, well-drilling, rural electrification and rail transportation, as well as health, education and community development. Food and fertilizer were also supplied, and a number of industrial co-operation initiatives were launched with the region's middle-income countries.

In anglophone Africa, Canadian aid tries both to meet the needs of the rural poor and to help overcome Africa's severe lack of infrastructure. Food production and rural development projects have been emphasized, and food aid has risen because of

widespread famine. Major recipients of CIDA assistance have included Tanzania, Egypt, Kenya, Ghana, Zambia and Zimbabwe.

Canada's assistance to countries in the Americas has totalled about \$800 million. In the Caribbean, where Canadian aid dates back to 1958, tourism is important; projects have included improvements to airports, communications links and water systems. The main priority is job creation, particularly in agriculture and manufacturing. In Latin America, where bilateral assistance from Canada began in 1970, rural development is emphasized. Countries in the Americas receiving significant amounts of bilateral aid from CIDA have included Haiti, Jamaica, Guyana and Colombia.

Through multilateral assistance Canada joins with other countries to support development initiatives beyond the scope of any single donor. Canadian funds for multilateral programs are channelled through UN agencies, financial institutions such as the World Bank and regional development banks, and other specialized international organizations. Canada contributes to about 65 programs or agencies and participates in their policy-making.

During the 1960s, Canada pioneered in providing government funding to help non-governmental organizations expand their efforts. In 1982-83, CIDA contributed \$63.6 million to assist 180 Canadian voluntary agencies in sponsoring about 2,500 projects in 111 developing countries, and provided \$59.6 million to help Canadian educational and social institutions take part in 768 projects in all regions of the world and all major sectors of development co-operation. Provincial governments contributed an additional \$24.3 million. A total of nearly \$150 million of official Canadian development assistance was provided to help finance more than 3,000 projects. These projects, typically in such areas as food, nutrition, public health, and education, encourage self-reliance through the use of local resources and often reach many of the poorest and most isolated people. Through another program created in 1974, CIDA provided \$18 million in 1982-83 to help 67 internationally constituted non-governmental organizations carry out projects, mostly in social development and community services.

Other CIDA disbursements during 1982-83 included \$25 million for international emergency relief, largely to assist refugees in Asia and Africa; \$16 million through an industrial co-operation program that helps Canadian business and industry participate in world development; and \$4.2 million in special Commonwealth and Canadian scholarships.

About half of Canada's overall aid program is tied to the procurement of Canadian goods and services. The bilateral program is 80% tied, while up to 20% may be untied to meet local costs. Goods such as equipment must have at least two-thirds Canadian

content to be considered Canadian-sourced. Programs other than bilateral are largely untied.

Canada has long been one of the world's major suppliers of food aid, mostly through shipments of wheat, flour and canola oil, through multilateral agencies (mainly the World Food Program), through bilateral agreements with such countries as Bangladesh, Ethiopia, Somalia, and the African states of the Sahel region, and through Canadian non-governmental organizations. Food aid is normally financed by grants. In 1982-83 Canada's food aid contributions totalled \$273 million.

Canadian aid in 1982-83 represented 0.46% of gross national product. Canada's objective is to increase its aid level to 0.5% of GNP by the mid-1980s and to reach the international target of 0.7% by the end of the decade.

### 21.7.2 International Development Research Centre (IDRC)

IDRC was established in 1970 to initiate and encourage research focused on the problems of the world's developing regions; it fosters co-operation between developing nations as well as between the developed and the developing world. In its role as co-ordinator of international development research, it helps developing regions to build up research capabilities, skills and institutions to solve their own problems.

Projects are channelled through five program divisions: agriculture, food and nutrition sciences; health sciences; information sciences; social sciences and co-operative programs, supporting joint projects between Canadian and Third World research institutions. As at March 31, 1983 IDRC had supported 1,634 projects in 101 countries.

A fellowship program with categories of awards for both Canadians and citizens of developing countries is designed to provide individuals with the opportunity to undertake training or research in various aspects of development.

IDRC is financed by the Parliament of Canada by means of an annual grant. Its status as a public corporation allows it to offer completely untied aid. IDRC is not an agent of the Canadian government and its officers and employees are not part of the public service of Canada. It is governed by an international autonomous board of governors; at least 11 of the governors, including the chairman and vice-chairman must be Canadian citizens. To date the 10 other members have been appointed from other countries, with six among them from developing countries. The centre submits an annual report to the Canadian Parliament through the secretary of state for external affairs.

The centre maintains a close and co-operative relationship with CIDA whose president is usually a member of IDRC's board of governors.

### 21.7.3 CUSO

CUSO recruits and places skilled individuals from all walks of life and of all ages on two-year contracts in the Third World to fill temporary manpower gaps and give on-the-job training. It supports, through volunteer participation, financial or material contributions or all three, specific development projects initiated and directed by Third World governments, groups or individuals. In Canada it seeks to promote activities leading to an understanding of and action on the causes of inequitable development.

CUSO receives funding from government sources, individuals, church groups, professional associations, service organizations, metres for millions, provincial governments, unions, businesses and corporations.

### 21.7.4 CESO

The Canadian executive service overseas (CESO) was created in 1967. The organization sends recently retired Canadian volunteers with expertise in business, technology and education overseas to share their knowledge with the people of the Third World. In 1969 the program was expanded to send CESO volunteers to various parts of Canada to assist Canadian native people. In 1979 a trade development program was undertaken enabling CESO consultants to function as catalysts between small and medium-sized Canadian industries and their counterparts in the developing world.

CIDA provides CESO with core funding. Other contributions have been made by Canadian industry, overseas clients, the Indian and northern affairs department, and the Northwest Territories government.

## 21.8 Defence

### 21.8.1 Department of National Defence

The national defence department was created by the National Defence Act, 1922. The defence minister controls and manages the Canadian forces and all matters relating to national defence establishments. He is responsible for presenting to cabinet matters of major defence policy for which cabinet direction is required. The minister continues to be responsible for certain civil emergency powers, duties and functions.

The chief of the defence staff is the senior military adviser to the minister and is charged with the control and administration of the Canadian forces. He is responsible for the effective conduct of military operations and the readiness of the forces to meet the commitments assigned to the department.

### 21.8.2 NATO and NORAD

Canada was one of the 12 original signatories of the North Atlantic Treaty Organization (NATO) in 1949. Successive Canadian governments have reaffirmed the view that Canada's security remains linked to that of Europe and the United States. Canada is com-

mitted to the principle of collective defence and remains convinced of the importance of NATO's role in reducing, and eventually removing, the underlying causes of potential East-West conflict through negotiation, reconciliation and settlement. In addition to its role as an alliance for defence through deterrence, NATO is a major forum for political consultation among its members.

Canada's membership in NATO continues to be a factor in the development of its political, economic and scientific-technological relations with Europe, by which Canada seeks to balance its relations with the United States. The alliance obliges both Canada and the United States to maintain a deep interest in European affairs and exemplifies the interdependence of Europe and North America.

**NORAD.** Canada's support of collective security is not limited to its role in NATO. Through its continuing co-operative defence arrangements with the United States in the North American Air Defence (NORAD) agreement, it participates in aerospace surveillance and warning systems, active air defence, anti-submarine defence and measures designed to protect the deterrent capacity of the United States.

### 21.8.3 The Canadian forces

The Canadian forces are organized to reflect the major commitments assigned by the government. All forces devoted to a primary mission are grouped under a single commander. Specifically, the Canadian forces are formed into National Defence Headquarters and five major commands reporting to the chief of the defence staff.

**Maritime command.** All Canadian maritime forces are under the commander, maritime command, (headquarters, Halifax, NS). The commander, maritime forces Pacific (headquarters, Esquimalt, BC) exercises operational control over assigned maritime forces in the Pacific. The role of maritime command is the surveillance and control of the sea approaches of the three oceans bordering Canada, and the provision of combat-ready ships in support of Canada's commitment to NATO and continental defence. The commander, maritime command is also the commander of the Canadian Atlantic sub-area of the western Atlantic command, under the supreme commander, allied command Atlantic. Additional roles are to support Canadian military operations as required; to conduct search and rescue operations in the Halifax and Victoria search and rescue regions (the Atlantic provinces, British Columbia and the surrounding ocean areas); and to carry out regional commitments in these areas.

Increased surface and air resources have been devoted to the surveillance and control of waters of Canadian economic interest, particularly in support of the fisheries and oceans department. A multitude of ships are identified each year and many are boarded by officers of the fisheries and oceans

department, assisted by Canadian military personnel.

**The naval reserve** is organized in 18 divisions across Canada and provides support for maritime command at sea and ashore.

**Mobile command.** The role of mobile command is to provide land forces trained and equipped for the protection of Canadian territory, to maintain operational readiness of combat formations in Canada required for overseas commitments, and to support United Nations or other peacekeeping operations.

The forces assigned include a brigade group in the West (headquarters, Calgary, Alta.) a brigade group in the East (headquarters, Valcartier, Que.) and a special service force consisting of air-portable elements (headquarters, Petawawa, Ont.). The command also provides troops to the United Nations force in Cyprus.

**The militia** is one of the oldest institutions in Canada, dating back to the late 17th century. Command of the militia is exercised by the commander, mobile command. Its role is to augment the regular forces in peace and war. The militia is organized under five area headquarters and 22 militia districts. There are a total of 117 major units and 14 minor units.

**Air command.** The role of air command is to provide operationally-ready regular and reserve air forces to meet Canada's national, continental and international commitments, and to carry out regional commitments within the Prairie region — Saskatchewan, Alberta and Manitoba as well as the northwest part of Ontario. Air command (headquarters, Winnipeg, Man.) consists of the following functional groups: fighter group, air transport group, and maritime air group, 10 tactical air group, 14 training group, and air reserve group.

**Fighter group** (headquarters, North Bay, Ont.) provides the air defence forces required to enforce Canadian sovereignty in national airspace and to meet Canada's commitment to continental defence under the NORAD agreement; to provide squadrons to meet the NATO North Flank commitment; to provide tactical fighter support to maritime command and mobile command; and to provide all operational fighter training.

**Air transport group** (headquarters, Trenton, Ont.) provides the Canadian forces with air transport which includes strategic airlift operations on a worldwide basis, tactical airlift in any area in the world and the operation of an air transport service. In addition, air transport group commands all primary air search and rescue forces for all regions of Canada.

**Maritime air group (MAG)**, (headquarters, Halifax, NS) is a component of air command. The group is responsible for management of all air resources engaged in northern patrol, maritime patrol, mari-

time surveillance, anti-submarine warfare and fisheries patrols.

The commander of maritime air group, responsible to the commander of air command, is under the operational control of the commander of maritime command while carrying out surveillance patrol and anti-submarine roles. A close working relationship between maritime command and maritime air group enables them to use a common operations centre.

The group conducts surveillance flights over Canada's coastal waters and the Arctic Archipelago. It also provides anti-submarine air forces as part of Canada's contribution to NATO.

**10 Tactical air group** with headquarters co-located with mobile command at St-Hubert, Que. operates all air resources engaged in the close support of the army. This involves helicopter fire support, reconnaissance and tactical transport over the battle area.

**14 Training group (14 TGP)** in Winnipeg, is responsible for aircrew selection, aircrew training to wings standard, junior leadership, survival and meteorological training. 14 TGP develops training policy for air command and is responsible for monitoring and evaluating all air command training.

**Air reserve group** comprises two wings, each with two tactical helicopter squadrons, in Montréal and Toronto and three other squadrons twinned with regular force units in Winnipeg, Edmonton and Summerside, PEI. Air reserve augmentation flights at eight different bases in Canada provide a cadre of trained personnel available for war establishment augmentation and for base expansion.

**Search and rescue (SAR).** Search and rescue activities are co-ordinated from Victoria, Edmonton, Trenton and Halifax. Rescue co-ordination centres (RCCs) are manned by Canadian forces personnel with Canadian Coast Guard officers attached on liaison duties in all centres except Edmonton. Besides the aircraft that are specially equipped and manned for SAR duties, other aircraft across Canada are assigned periodically to augment these primary SAR resources.

**The Canadian forces training system.** The functions of the Canadian forces training system include the planning and conduct of all recruit, trades, specialist and officer classification training common to more than one command. This group also assumes the regional commitments for the central region (Ontario).

**Communication command.** This command maintains strategic communications for the forces and, in emergencies, for the federal and provincial governments. The command also provides points for interconnecting strategic and tactical networks. It also operates the major defence department automatic data processing centres.

A communication reserve assigned to Canadian forces communication command is composed of six

communication regiments, 12 communication squadrons and three independent communication troops. They are located across Canada and often co-located with regular force communication units. The role of the communication reserve is to augment and support communication command forces in peace and war.

**Canadian forces northern region.** The commander northern region is responsible for military matters and for co-ordinating and supporting the activities of forces when they are employed in the North. With headquarters at Yellowknife, NWT, and a headquarters detachment at Whitehorse, YT, the northern region encompasses Yukon and Northwest Territories, including the islands in Hudson Bay, James Bay and the Arctic Archipelago, and extends to the geographic North Pole. Its total area exceeds 3.9 million square kilometres, 40% of Canada's mass.

**Canadian forces (Europe).** With a role to provide combat-ready land and air forces for the defence of Central Europe, Canadian forces allocated to support NATO are located at Lahr and Baden Solingen in the Black Forest region of the Federal Republic of Germany.

#### 21.8.4 Peacekeeping operations

Since World War II Canada has played a vital role in co-operation with the United Nations and other international bodies in peacekeeping and the promotion of international security. Since 1947 approximately 79,000 Canadian servicemen and servicewomen have participated in 15 peace-restoring, peacekeeping and truce supervisory operations mounted by the United Nations and four truce supervisory or observer missions conducted outside the aegis of that world body. Excluding the Korean War period, the largest annual commitment of Canadian forces personnel to peacekeeping operations occurred in 1964-65 when approximately 2,600 servicemen were actively involved in seven missions.

The United Nations Force in Cyprus (UNFICYP) was established in 1964 with Canada providing one of the first contingents. In 1984 the Canadian contingent consisted of 515 regular and reserve force personnel.

In the Middle East Canada has been involved in the United Nations disengagement observer force (UNDOF) on the Golan Heights primarily in communications, logistics and technical support; and the United Nations truce supervisory organization (UNTSO) in Egypt, Syria, Israel, Lebanon and Jordan as military observers or on staff.

In Korea, Canada has an officer on a seven-nation advisory group as part of a United Nations military armistice commission.

Canadian participation in the United Nations military observer group in India-Pakistan is now limited to military airlift support in the twice yearly

move of headquarters between Srinagar and Rawalpindi.

#### 21.8.5 Military training assistance

From April 1982 to March 1984, the Canadian forces provided a three-person medical detachment to the Commonwealth military training team in Uganda. Countries receiving training assistance under continuing agreements or negotiating with Canada on provisions of training assistance include: Antigua, Barbados, Cameroon, Ghana, Guyana, Jamaica, Kenya, Malaysia, Nepal, Nigeria, Oman, Sierra Leone, Sudan, Tanzania and Zambia.

Canada provides training facilities for some NATO countries on a cost-recovery basis. British military forces were trained in Canada under the terms of a 10-year agreement signed in 1971. A similar agreement was signed with the Federal Republic of Germany in 1973.

### 21.9 Emergency planning

Emergency Planning Canada (EPC) evolved in 1974 from the former Canada Emergency Measures Organization. Although attached to the national defence department for administrative purposes, it receives policy direction from the Privy Council office. EPC operates under the authority of the Emergency Planning Order, PC 1981-1305, May 21, 1981.

EPC co-ordinates the planning of the federal response to natural or man-made disasters, from floods to nuclear war, that could occur in Canada, and encourages emergency planning across the nation. The premise under which EPC operates is to plan for a nationwide emergency capability which, by concentrating on the effective handling of peacetime emergencies, will develop the base for rapid expansion, if necessary, to meet the exigencies of war.

All federal departments have nominated emergency planning officers. EPC planners analyze departmental plans to ensure co-ordination and avoid gaps or overlaps. EPC headquarters staff in Ottawa, a regional director and an assistant in each provincial capital are in touch with emergency planners in federal branches in their regions, and with provincial emergency organizations to form a network to respond to emergencies.

EPC provides funds to the provinces for certain approved emergency planning projects, and sponsors more than 40 courses a year in emergency planning at a federal study centre in Arnprior, Ont.

The assistant secretary to the cabinet (emergency planning) represents Canada on the NATO senior civil emergency planning committee, and is the Canadian co-chairman of a United States-Canada civil emergency planning committee.

**Disaster assistance.** EPC administers federal disaster financial assistance to provincial governments

in dealing with the cost of a disaster. Since 1970, the federal government has paid more than \$84 million in such assistance to the provinces.

The federal government provides funds to provinces through a joint emergency planning program (JEPP), established in October 1980, and funded at \$6 million a year. It reflects such federal priorities as severe, but rare disasters; the saving of life

and mitigation of human suffering; the preservation of peace, order and good government of Canada; and risk analysis, warning and communications.

JEPP was conceived to encourage co-operation between the federal and provincial governments in working toward an enhanced national capability to meet emergencies with a reasonably uniform standard of services across the country.

#### Sources

- 21.1 - 21.3.5, 21.4 - 21.4.7, 21.6.1 Domestic Information Services Division, Department of External Affairs.
- 21.3.6 Information Services Directorate, Department of the Environment.
- 21.5 - 21.5.4 Trade Measures and Analysis Section, External Trade Division, Statistics Canada.
- 21.6.2 Corporate Communications Department, Export Development Corp.
- 21.6.3 - 21.6.4 Communications Division, Department of National Revenue, Customs and Excise.
- 21.7.1 Public Affairs Branch, Canadian International Development Agency.
- 21.7.2 Communications Division, International Development Research Centre.
- 21.7.3 Public Affairs Division, CUSO.
- 21.7.4 Canadian Executive Service Overseas.
- 21.8 Parliamentary Affairs Division, Department of National Defence.
- 21.9 Public Information Division, Emergency Planning Canada.

#### Selected References

- Canadian representatives abroad.* Department of External Affairs, Ottawa, November 1983.
- Canadians in the third world.* CIDA's year in review 1982-83. Ottawa, 1984.
- Department of External Affairs Annual Report 1982-83.* Ottawa, 1984.
- Exports.* Merchandise trade, 1983. Statistics Canada 65-202, Ottawa, June 1984.
- Imports.* Merchandise trade, 1983. Statistics Canada 65-203, Ottawa, 1984.
- Summary of external trade.* Statistics Canada 65-001, Ottawa, July 1984.

# TABLES

- .. not available

... not appropriate or not applicable

— nil or zero

-- too small to be expressed
- e estimate

p preliminary

r revised

certain tables may not add due to rounding

## 21.1 Personnel at Canadian diplomatic posts abroad, 1983<sup>1</sup>

Geographic region	Program personnel	Support personnel	Program	Program personnel	Support personnel
International organizations	57	106	Consular	45	133
United States	305	473	Customs and excise	10	13
Anglophone Africa	66	231	Defence relations	111	124
Francophone Africa	73	326	Immigration	297	450
Middle East	65	203	General relations	240	180
Latin America	116	278	International development assistance	110	71
Caribbean	94	238	Police	45	30
South and Southeast Asia	114	602	Information and culture	117	207
North Asia and Pacific	152	306	Science, technology and environment	18	12
Western Europe	441	1,101	Tourism	70	47
Eastern Europe	64	237	Trade	401	305
Total	1,577	4,101	Transport, communications and energy	11	7
			Administration	102	2,522
Grand total		5,678	Total	1,577	4,101

<sup>1</sup>Fiscal year ending Mar. 31.

## 21.2 Total imports, exports and trade balance on a customs basis, Canada, 1963-83

Year	Imports		Exports		Trade balance \$'000,000	Ratio of exports to imports %
	\$'000,000	Percentage change from previous year	\$'000,000	Percentage change from previous year		
1963	6,578	4.5	6,990	10.0	412	106.3
1964	7,488	13.8	8,303	18.8	815	110.9
1965	8,633	15.3	8,767	5.6	134	101.6
1966	10,072	16.7	10,325	17.8	253	102.5
1967	10,873	8.0	11,420	10.6	547	105.0
1968	12,360	13.7	13,679	19.8	1,319	110.7
1969	14,130	14.3	14,871	8.7	741	105.2
1970	13,952	-1.3	16,820	13.1	2,868	120.6
1971	15,617	11.9	17,820	5.9	2,203	114.1
1972	18,668	19.5	20,150	13.1	1,482	107.9
1973	23,325	24.9	25,421	26.2	2,096	109.0
1974	31,722	36.0	32,442	27.6	720	102.3
1975	34,716	9.4	33,328	2.7	-1,388	96.0
1976	37,494	8.0	38,475	15.4	981	102.6
1977	42,363	13.0	44,554	15.8	2,191	105.2
1978	50,108	18.3	53,182	19.4	3,074	106.1
1979	62,871	25.5	65,641	23.4	2,770	104.4
1980	69,274	10.2	76,159	16.0	6,885	109.9
1981	79,482	14.7	83,811	10.0	4,329	105.4
1982	67,856	-14.6	84,530	0.9	16,674	124.6
1983	75,587	11.4	90,964	7.6	15,377	120.3

## 21.3 Imports<sup>1</sup> into Canada from all countries on a customs basis, 1979-83 and percentage of 1983 total (million dollars)

Section and selected commodities	1979	1980	1981	1982	1983	Percentage of 1983 total
LIVE ANIMALS	75	113	201	136	132	0.2
FOOD, FEED, BEVERAGES AND TOBACCO	4,161	4,690	5,033	4,802	4,870	6.4
Meat and fish	668	662	689	678	774	1.0
Fruits and vegetables	1,462	1,498	1,802	1,873	1,880	2.5
Raw sugar	236	500	467	254	201	0.3

### 21.3 Imports<sup>1</sup> into Canada from all countries on a customs basis, 1979-83 and percentage of 1983 total (million dollars) (concluded)

Section and selected commodities	1979	1980	1981	1982	1983	Percentage of 1983 total
Coffee	465	488	441	407	401	0.5
CRUDE MATERIALS, INEDIBLE	7,970	11,345	12,307	8,691	7,201	9.5
Metal ores, concentrates and scrap	1,130	2,134	1,876	1,482	1,651	2.2
Coal	865	811	834	932	840	1.1
Crude petroleum	4,497	6,919	8,004	4,979	3,274	4.3
FABRICATED MATERIALS, INEDIBLE	12,024	12,708	14,547	11,795	14,006	18.5
Wood and paper	975	919	1,173	873	1,198	1.6
Textiles	1,391	1,276	1,426	1,193	1,479	2.0
Petroleum and coal products	394	688	881	862	1,046	1.4
Chemicals	3,240	3,354	3,814	3,586	4,392	5.8
Iron and steel	1,669	1,415	2,275	1,238	1,175	1.6
Non-ferrous metals	1,924	2,581	2,191	1,597	2,049	2.7
END PRODUCTS, INEDIBLE	38,074	39,656	46,464	41,419	48,397	64.0
Industrial machinery	5,691	6,752	7,297	5,657	5,292	7.0
Agricultural machinery and tractors	2,115	2,092	2,386	1,688	1,513	2.0
Motor vehicles	6,614	5,971	6,927	5,423	7,904	10.5
Motor vehicle parts	8,547	7,638	9,275	9,701	11,411	15.1
Communications equipment	1,965	2,239	2,769	2,578	3,315	4.4
Office machinery	1,348	1,903	2,582	2,867	3,110	4.1
Apparel	884	857	1,038	1,068	1,293	1.7
SPECIAL TRANSACTIONS - TRADE	567	762	930	1,013	981	1.3
Total, imports	62,871	69,274	79,482	67,856	75,587	100.0

<sup>1</sup>Includes other commodities not listed.

### 21.4 Domestic exports<sup>1</sup> from Canada to all countries on a customs basis, 1979-83 and percentage of 1983 total (million dollars)

Section and selected commodities	1979	1980	1981	1982	1983	Percentage of 1983 total
LIVE ANIMALS	245	254	229	325	340	0.4
FOOD, FEED, BEVERAGES AND TOBACCO	6,069	8,009	9,213	9,896	10,074	11.4
Meat and fish	1,720	1,773	2,111	2,362	2,247	2.5
Wheat	2,180	3,862	3,728	4,289	4,648	5.3
CRUDE MATERIALS, INEDIBLE	12,538	14,759	15,211	14,783	14,393	16.3
Metal ores, concentrates and scrap	3,895	4,210	4,086	3,192	2,900	3.3
Crude petroleum	2,405	2,899	2,505	2,729	3,457	3.9
Natural gas	2,889	3,984	4,370	4,755	3,958	4.5
FABRICATED MATERIALS, INEDIBLE	24,376	29,345	30,540	27,865	30,011	33.9
Lumber	3,901	3,353	2,989	2,913	3,969	4.5
Wood pulp and similar pulp	3,083	3,873	3,819	3,221	3,058	3.5
Newsprint paper	3,222	3,684	4,326	4,086	4,005	4.5
Chemicals	3,322	4,055	4,614	4,035	4,337	4.9
Petroleum and coal products	1,885	2,324	2,643	2,538	2,816	3.2
Iron and steel	1,599	2,042	2,315	1,965	1,643	1.9
Non-ferrous metals	3,653	6,070	5,420	4,807	5,431	6.1
END PRODUCTS, INEDIBLE	20,924	21,850	25,473	28,691	33,472	37.8
Industrial machinery	1,949	2,181	2,739	2,485	2,368	2.7
Agricultural machinery and tractors	848	876	885	651	551	0.6
Motor vehicles	7,420	7,458	8,910	11,666	14,055	15.9
Motor vehicle parts	4,479	3,466	4,275	4,852	7,302	8.3
SPECIAL TRANSACTIONS - TRADE	166	228	671	265	216	0.2
Total, domestic exports	64,318	74,445	81,337	81,825	88,506	100.0
Total, re-exports	1,324	1,714	2,474	2,705	2,458	...
Total, exports	65,641	76,159	83,811	84,530	90,964	...

<sup>1</sup>Includes other commodities not listed.

**21.5 Trade of Canada with principal trading areas on a customs basis, 1979-83**

Item and year	United States		United Kingdom		Other EEC		Japan		Other countries	
	Value \$'000,000	%	Value \$'000,000	%	Value \$'000,000	%	Value \$'000,000	%	Value \$'000,000	%
<b>Imports</b>										
1979	45,571	72.5	1,928	3.1	3,664	5.8	2,159	3.4	9,549	15.2
1980	48,614	70.2	1,974	2.8	3,574	5.2	2,796	4.0	12,316	17.8
1981	54,538	68.6	2,386	3.0	4,116	5.2	4,057	5.1	14,385	18.1
1982	47,866	70.5	1,904	2.8	3,805	5.6	3,527	5.2	10,754	15.8
1983	54,103	71.6	1,810	2.4	4,150	5.5	4,409	5.8	11,115	14.7
<b>Exports<sup>1</sup></b>										
1979	44,535	67.8	2,623	4.0	4,677	7.1	4,100	6.2	9,706	14.8
1980	48,174	63.3	3,245	4.3	6,338	8.3	4,374	5.7	14,028	18.4
1981	55,487	66.2	3,360	4.0	5,634	6.7	4,522	5.4	14,808	17.7
1982	57,685	68.2	2,727	3.2	4,858	5.8	4,590	5.4	14,670	17.4
1983	66,333	72.9	2,509	2.8	4,312	4.7	4,762	5.2	13,048	14.3

<sup>1</sup>Includes domestic exports and re-exports.**21.6 Trade by section, with principal trading areas on a customs basis, 1983**

Item	United States %	United Kingdom %	Other EEC countries %	Japan %	Other countries %	Total %
<b>Imports</b>						
Live animals	97.0	0.8	1.5	—	0.7	100.0
Food, feed, beverages and tobacco	54.0	3.0	9.5	1.2	32.3	100.0
Crude materials, inedible	47.6	3.2	1.4	0.8	47.0	100.0
Fabricated materials, inedible	71.7	3.0	8.9	3.1	13.3	100.0
End products, inedible	76.8	2.0	4.6	7.9	8.7	100.0
<b>Exports</b>						
Live animals	85.5	0.9	2.9	0.9	9.8	100.0
Food, feed, beverages and tobacco	26.0	5.0	6.4	10.6	52.0	100.0
Crude materials, inedible	63.1	4.0	7.5	14.0	11.4	100.0
Fabricated materials, inedible	75.6	3.4	5.9	4.8	10.3	100.0
End products, inedible	88.6	1.0	2.0	0.6	7.8	100.0

**21.7 Measures of bilateral trade between Canada and the United States, 1978-82  
(billions of US dollars)**

Year	Published by Canada			Published by United States			Reconciled figures		
	Imports from US	Exports to US	Canadian balance	Exports to Canada	Imports from Canada	Canadian balance	From US to Canada	From Canada to US	Canadian balance
1978	30.7	32.6	1.9	28.4	33.5	5.2	30.3	33.1	2.7
1979	38.7	38.0	-0.6	33.1	38.0	5.0	37.9	38.5	0.6
1980	41.4	41.2	-0.2	35.4	41.5	6.1	40.7	42.0	1.4
1981	45.2	46.4	1.2	39.6	46.4	6.9	44.6	47.4	2.8
1982	38.9	46.8	7.9	33.7	46.5	12.8	38.1	47.8	9.7

21.8 Price and volume indexes of trade in Canada by section, on a customs basis, 1979-83 (1971 = 100)

Item and year	Food, feed, beverages and tobacco			Crude materials, inedible			Fabricated materials, inedible			End products, inedible			All sections		
	Index	Percentage change from previous year		Index	Percentage change from previous year		Index	Percentage change from previous year		Index	Percentage change from previous year		Index	Percentage change from previous year	
<b>Current weighted price indexes</b>															
Imports															
1979	241.0	12.3		514.8	20.0		260.8	21.9		198.3	11.0		229.8	14.4	
1980	267.7	11.1		622.5	20.9		314.8	20.7		221.1	11.5		267.7	16.5	
1981	280.9	4.9		739.6	18.8		336.4	3.7		253.8	14.8		298.6	11.5	
1982	271.0	-3.5		625.4	-15.4		338.0	8.6		270.7	6.7		303.7	1.7	
1983	269.2	-0.7		427.7	-31.6		338.6	0.2		272.1	0.5		292.8	-3.6	
Domestic exports															
1979	263.1	22.6		392.7	26.9		292.0	23.6		175.8	11.4		248.2	20.9	
1980	301.3	14.5		528.8	34.7		335.3	14.8		194.9	10.9		290.9	17.2	
1981	327.6	8.7		543.3	2.7		360.9	7.6		214.2	9.9		309.5	6.4	
1982	308.8	-5.7		580.3	6.8		355.5	-1.5		229.4	7.1		310.9	0.5	
1983	306.6	-0.7		554.6	-4.4		346.9	-2.4		237.4	3.5		306.9	-1.3	
<b>Fixed weight volume indexes</b>															
Imports															
1979	154.5	0.2		117.1	12.9		145.8	18.4		195.7	9.6		175.2	10.8	
1980	156.7	1.5		137.9	17.7		127.1	-12.4		182.8	-6.6		165.7	-5.4	
1981	160.2	2.2		125.9	-8.7		140.3	10.3		186.6	2.1		170.4	2.8	
1982	158.5	-1.1		105.3	-16.4		110.3	-21.7		156.1	-16.3		143.2	-16.0	
1983	161.8	2.1		127.4	21.0		130.6	18.4		181.6	16.3		165.4	15.5	
Domestic exports															
1979	112.8	-2.8		97.7	11.9		140.2	3.0		192.2	-0.4		147.6	1.8	
1980	130.0	15.2		85.4	-12.6		147.0	4.8		181.0	-5.8		145.7	-1.2	
1981	137.5	5.8		85.7	0.3		142.2	-3.3		192.0	6.1		149.7	2.7	
1982	156.7	14.0		77.9	-9.1		131.8	-7.3		201.9	5.2		149.9	0.1	
1983	160.7	2.6		79.4	1.9		145.3	10.2		227.7	12.8		164.3	9.6	

### 21.9 Imports into Canada from all countries on a customs basis, by section and commodity, 1979-83 (million dollars)

Section and commodity	1979	1980	1981	1982	1983
<b>LIVE ANIMALS</b>	<b>75.4</b>	<b>112.9</b>	<b>201.4</b>	<b>136.1</b>	<b>132.2</b>
<b>FOOD, FEED, BEVERAGES AND TOBACCO</b>	<b>4,161.2</b>	<b>4,689.9</b>	<b>5,032.7</b>	<b>4,801.5</b>	<b>4,870.5</b>
Meat, fresh, chilled or frozen	319.1	273.4	290.9	286.3	311.1
Other meat and meat preparations	34.8	34.3	37.9	39.6	44.8
Fish and marine animals	313.8	354.5	359.9	351.8	418.3
Dairy produce, eggs and honey	108.1	101.3	111.5	118.3	115.2
Indian corn, shelled	115.4	182.2	213.2	114.9	67.8
Other cereals and cereal preparations	139.4	165.4	185.3	192.4	215.8
Bananas and plantains, fresh	90.6	98.5	113.0	119.7	120.8
Grapes, fresh	102.6	108.0	119.2	140.6	151.2
Oranges, mandarins and tangerines, fresh	103.1	100.6	112.8	141.3	121.1
Other fresh fruits and berries	209.2	233.0	277.2	307.0	313.2
Fruits, dried or dehydrated	68.3	69.1	77.7	80.5	81.0
Orange juice and concentrates	122.8	124.3	150.4	153.5	154.0
Other fruit juices and concentrates	52.1	50.1	63.7	68.0	58.1
Fruits and products, canned	84.7	86.2	95.2	88.5	80.4
Other fruits and fruit preparations	39.1	33.2	37.2	42.1	38.3
Nuts, except oil nuts	92.1	101.3	108.9	102.2	109.7
Tomatoes, fresh	72.3	71.5	91.4	84.3	96.6
Other fresh vegetables	266.5	277.4	365.0	368.5	388.9
Other vegetables and vegetable preparations	158.6	144.6	190.5	176.8	166.8
Raw sugar	236.2	499.5	467.1	253.5	200.5
Refined sugar, molasses and syrups	35.1	62.5	62.9	36.6	44.9
Sugar preparations and confectionery	80.2	87.8	98.7	112.1	120.9
Cocoa and chocolate	120.4	111.5	108.2	104.3	107.4
Coffee	464.7	487.6	440.6	406.8	401.3
Tea	58.4	65.0	62.4	63.1	68.5
Other foods and materials for foods	182.7	206.7	231.2	233.7	271.7
Oilseed cake and meal	131.6	113.1	119.7	108.5	127.4
Other fodder and feed	53.3	58.3	64.2	78.7	78.3
Distilled alcoholic beverages	110.3	125.7	139.8	156.9	131.9
Other beverages	167.5	206.1	204.2	221.0	201.6
Tobacco	28.2	57.2	32.8	50.0	63.0
<b>CRUDE MATERIALS, INEDIBLE</b>	<b>7,969.9</b>	<b>11,344.5</b>	<b>12,307.6</b>	<b>8,690.8</b>	<b>7,201.1</b>
Fur skins, undressed	176.5	143.3	159.9	136.7	135.4
Other crude animal products	90.2	85.6	84.4	58.4	81.6
Soybeans	107.8	141.9	115.0	128.1	95.9
Other oilseeds, oil nuts and oil kernels	68.5	58.4	124.4	68.5	73.1
Rubber and allied gums, natural	134.6	124.2	118.6	81.5	111.2
Other crude vegetable products	121.1	126.2	147.1	142.3	155.2
Crude wood materials	120.8	99.4	95.0	94.2	121.6
Wool and fine animal hair	55.6	49.1	47.7	34.7	35.6
Cotton	112.3	129.9	137.1	80.4	108.6
Man-made fibres	94.0	88.5	125.5	113.2	138.5
Other textile fibres	4.4	4.4	5.5	2.1	1.8
Iron ores and concentrates	227.4	269.9	294.9	192.3	233.2
Scrap iron and steel	94.7	86.2	78.3	35.1	51.9
Aluminum ores, concentrates and scrap	262.1	361.1	412.2	385.1	387.5
Other metals in ores, concentrates and scrap	545.9	1,417.2	1,090.8	869.7	978.4
Coal	865.0	811.2	833.7	931.5	840.4
Crude petroleum	4,497.2	6,919.1	8,004.2	4,979.3	3,274.0
Other crude bituminous substances	2.0	2.1	1.9	1.8	1.4
Abrasives, natural	24.6	25.0	27.2	18.5	18.3
Phosphate rock	99.1	132.7	133.0	101.5	102.2
Other crude non-metallic minerals	159.9	170.7	178.4	158.4	149.7
Other waste and scrap materials	106.2	98.4	92.8	77.5	105.6
<b>FABRICATED MATERIALS, INEDIBLE</b>	<b>12,023.9</b>	<b>12,708.5</b>	<b>14,547.3</b>	<b>11,794.8</b>	<b>14,005.6</b>
Leather and leather fabricated materials	146.7	88.9	113.8	95.6	130.3
Rubber fabricated materials	132.7	120.2	151.0	141.2	173.9
Lumber	270.9	234.9	275.6	176.6	281.1
Veneer	24.9	26.4	27.6	20.0	32.9
Plywood and wood building boards	89.7	60.9	114.9	40.9	75.8
Other wood fabricated materials	151.7	127.6	142.3	91.3	133.6
Wood pulp and similar pulp	78.8	78.9	83.5	88.1	86.5
Paper and paperboard	358.9	389.9	529.5	456.5	588.1
Cotton yarn and thread	45.3	44.5	35.4	27.4	40.4
Man-made fibre yarn and thread	189.0	158.9	185.8	140.8	202.0
Other yarn and thread	85.5	92.8	109.9	97.7	124.8
Cordage, twine and rope	33.2	42.5	38.0	30.3	29.7
Broad woven fabrics, wool and hair	43.8	38.7	57.0	51.8	56.0
Broad woven fabrics, cotton	165.1	153.3	159.7	116.0	137.6
Broad woven fabrics, man-made	142.2	119.1	153.9	130.3	152.7
Broad woven fabrics, mixed fibres	287.1	229.3	282.5	220.9	265.2
Other broad woven fabrics	33.2	39.0	32.3	29.4	40.1
Coated or impregnated fabrics	154.2	136.8	131.8	138.1	189.5

## 21.9 Imports into Canada from all countries on a customs basis, by section and commodity, 1979-83 (million dollars) (continued)

Section and commodity	1979	1980	1981	1982	1983
Other textile fabricated materials	212.1	221.2	239.3	209.7	241.3
Vegetable oils and fats, except essential oils	104.1	82.2	73.5	64.4	78.0
Other oils, fats, waxes, extracts and derivatives	94.1	108.3	110.4	101.4	113.8
Inorganic chemicals	353.2	343.1	399.0	369.7	410.9
Organic chemicals	895.3	930.4	1,088.9	1,019.1	1,265.8
Fertilizers and fertilizer materials	135.1	134.9	157.2	143.1	184.3
Synthetic and reclaimed rubber	118.9	126.3	158.6	138.8	160.8
Plastics materials, not shaped	564.4	537.2	608.0	553.1	750.9
Plastic film and sheet	181.7	192.2	242.5	208.3	268.3
Other plastics, basic shapes and forms	135.5	128.6	154.4	137.3	181.4
Dyestuffs, except dyeing extracts	81.7	79.8	75.8	62.6	76.8
Pigments, lakes and toners	62.1	53.5	64.9	51.9	81.1
Paints and related products	94.9	86.3	98.3	84.6	111.4
Other chemical products	617.5	741.6	766.8	817.9	900.4
Fuel oil	140.1	314.8	387.1	314.7	405.4
Lubricating oils and greases	70.4	71.9	72.3	56.1	62.3
Coke of petroleum and coal	106.5	116.8	162.7	120.7	135.3
Other petroleum and coal products	77.0	184.2	308.8	370.6	443.5
Bars and rods, steel	173.4	135.7	221.6	143.1	160.8
Plate, sheet and strip, steel	648.7	432.6	962.9	404.5	413.8
Structural shapes, steel and sheet piling	125.1	102.8	179.4	67.8	77.4
Pipes and tubes, iron and steel	310.7	358.1	465.4	365.8	246.5
Wire and wire rope, iron and steel	82.6	63.1	76.3	58.8	70.2
Other iron and steel and alloys	328.2	322.6	369.7	197.7	206.1
Aluminum, including alloys	441.0	424.1	445.3	366.6	438.2
Copper and alloys	156.1	131.9	193.7	139.3	176.1
Nickel and alloys	85.3	78.4	91.0	66.4	52.1
Precious metals, including alloys	1,063.0	1,738.7	1,242.1	878.4	1,227.1
Tin, including alloys	83.1	90.4	69.5	55.8	60.8
Other non-ferrous metals and alloys	95.3	117.0	149.3	90.1	94.4
Bolts, nuts and screws	203.5	190.8	208.3	179.6	198.6
Other basic hardware	279.7	269.1	312.9	262.2	314.3
Chains	49.3	57.3	52.1	36.7	38.8
Valves	165.0	209.8	241.3	237.7	170.9
Pipe fittings	128.0	130.4	166.9	148.6	119.4
Other metal fabricated basic products	242.0	255.8	287.1	299.0	327.9
Clay bricks, clay tiles and refractories	176.9	210.7	214.4	152.0	180.3
Sheet and plate glass	59.2	52.6	50.5	38.7	44.2
Other glass basic products	112.4	127.6	133.3	127.3	138.6
Abrasive basic products	79.7	81.6	92.8	70.2	85.2
Natural and synthetic gem stones	101.0	109.2	129.0	113.8	151.6
Other non-metallic mineral basic products	117.8	136.5	178.1	141.1	131.9
Electricity	0.7	2.6	5.9	5.3	2.5
Other fabricated materials, inedible	238.7	243.1	265.5	231.4	266.0
<b>END PRODUCTS, INEDIBLE</b>	<b>38,073.6</b>	<b>39,655.9</b>	<b>46,464.1</b>	<b>41,419.3</b>	<b>48,397.1</b>
<b>Machinery</b>	<b>7,805.5</b>	<b>8,843.7</b>	<b>9,682.1</b>	<b>7,344.6</b>	<b>6,805.5</b>
Engines and turbines, diesel and general purpose	141.4	150.4	157.9	98.3	101.4
Other engines and turbines, general purpose	207.5	225.8	302.1	252.7	321.2
Electric generators and motors	325.5	279.9	333.7	316.3	273.0
Bearings	227.9	241.8	253.9	203.2	208.6
Other mechanical power transmission equipment	201.2	231.0	257.2	217.4	187.7
Compressors, blowers and vacuum pumps	147.3	176.4	189.2	175.6	120.9
Pumps, except oil well pumps	119.7	141.2	165.1	151.4	132.1
Packaging machinery	101.2	104.4	116.5	108.4	119.9
Other general purpose industrial machinery	256.6	329.7	388.6	322.8	307.0
Conveyors and conveying systems	47.3	68.2	76.9	70.5	66.7
Elevators and escalators	13.2	15.7	19.9	21.8	22.0
Industrial trucks, tractors, trailers and stackers	160.4	157.8	141.6	83.9	92.9
Hoisting machinery	165.2	170.2	211.4	152.6	87.8
Other materials handling equipment	135.6	128.8	104.1	69.8	126.4
Drilling machinery and drill bits	475.1	643.1	552.2	483.3	348.2
Power shovels	183.1	233.9	179.5	144.6	173.0
Bulldozing and similar equipment	33.9	46.1	60.4	43.0	31.6
Front-end loaders	225.7	258.0	289.7	128.5	174.2
Other excavating machinery	170.4	204.4	172.8	90.4	88.0
Mining, oil and gas machinery	233.0	284.5	312.0	240.4	206.9
Construction and maintenance machinery	227.4	242.9	227.3	149.3	145.9
Machine tools, metalworking	338.5	539.7	719.6	325.5	259.4
Welding apparatus and equipment	67.1	80.7	93.5	70.0	91.7
Rolling mill machinery	50.0	61.8	86.1	107.1	53.3
Other metalworking machinery	224.0	288.2	301.9	256.6	237.2
Pulp and paper industries machinery	120.1	162.5	244.4	197.7	139.9
Printing presses	111.4	122.0	148.5	94.0	114.8
Other printing machinery and equipment	113.2	128.4	147.0	106.6	106.5

### 21.9 Imports into Canada from all countries on a customs basis, by section and commodity, 1979-83 (million dollars) (continued)

Section and commodity	1979	1980	1981	1982	1983
Spinning, weaving and knitting machinery	62.4	78.4	82.0	73.1	70.6
Other textile industries machinery	101.7	104.3	103.5	79.5	96.6
Food, beverages and tobacco industries machinery	139.7	156.8	159.8	149.4	157.4
Plastics and chemical industry	147.2	188.4	171.5	198.2	182.7
Other special industry machinery	416.7	506.3	526.7	474.6	446.7
Soil preparation, seeding and fertilizing machinery	179.9	154.8	176.2	125.0	101.6
Combine reaper-threshers	245.0	271.6	323.5	287.3	205.4
Other haying and harvesting machinery	145.3	180.0	193.9	127.5	110.2
Other agricultural machinery and equipment	268.1	282.2	312.5	228.0	210.0
Wheel tractors, new	655.3	619.1	854.7	582.7	550.2
Track-laying tractors and used tractors	229.4	220.3	159.0	61.1	71.5
Tractor engines and tractor parts	391.9	364.0	365.8	276.5	264.4
Transportation and Communication Equipment	19,477.0	18,651.3	22,482.8	20,058.2	25,834.4
Railway and street railway rolling stock	229.3	220.8	184.7	218.1	138.4
Passenger automobiles and chassis	4,381.3	4,416.2	5,066.1	4,043.0	6,209.4
Trucks, truck tractors and chassis	1,777.7	1,135.4	1,385.5	934.8	1,167.1
Other motor vehicles	454.7	419.2	475.2	445.6	527.9
Motor vehicle engines	1,120.1	1,161.7	1,243.6	1,275.5	1,401.9
Motor vehicle engine parts	443.3	314.9	494.8	481.6	674.5
Motor vehicle parts, except engines	6,983.8	6,161.7	7,536.9	7,943.7	9,333.2
Marine engines and parts	179.7	191.8	202.9	164.8	160.7
Ships, boats and parts, except engines	144.2	121.0	328.0	118.9	618.6
Aircraft, complete with engines	679.4	860.4	1,252.1	601.0	808.0
Aircraft engines and parts	291.6	371.9	469.7	374.7	457.2
Aircraft parts, except engines	393.3	594.1	628.6	547.2	549.4
Other transportation equipment	433.9	443.1	445.3	331.6	471.9
Telephone and telegraph equipment	138.2	135.5	170.4	164.5	195.7
Televisions, radio sets and phonographs	471.6	443.2	534.7	461.2	597.6
Electronic tubes and semi-conductors	384.8	574.6	688.4	604.4	862.2
Other telecommunication and related equipment	970.1	1,085.8	1,375.9	1,347.6	1,659.7
Other Equipment and Tools	5,033.5	5,839.7	7,177.2	7,116.5	8,005.4
Air conditioning and refrigeration equipment	286.2	285.6	312.2	247.3	294.2
Electric lighting fixtures and portable lamps	147.3	140.0	162.1	134.7	161.6
Switchgear and protective equipment	114.4	110.6	136.2	144.3	131.4
Industrial control equipment	85.2	94.9	100.0	87.0	86.9
Other electric lighting distribution equipment	232.7	247.8	276.4	261.8	331.0
Auxiliary electric equipment for engines	219.2	175.6	224.9	283.3	428.1
Electrical property measuring instruments	113.9	133.5	170.7	166.6	184.7
Miscellaneous measuring and controlling instruments	177.3	210.8	256.2	277.1	268.9
Medical and related equipment	180.5	217.7	263.2	271.3	313.5
Navigation equipment	32.1	36.8	48.3	79.5	69.0
Other measuring and laboratory equipment	466.3	577.7	669.9	654.5	670.9
Safety and sanitation equipment	134.0	144.6	168.7	155.7	166.6
Service industry equipment	130.5	125.7	138.6	122.2	136.8
Furniture and fixtures	270.4	272.3	344.8	249.3	309.2
Hand tools and cutlery	326.6	355.3	398.2	286.5	344.6
Electronic computers	1,103.5	1,652.8	2,327.2	2,647.4	2,882.8
Other office machines and equipment	244.8	250.6	254.9	219.5	226.7
Miscellaneous equipment and tools	768.6	807.4	924.7	828.5	998.5
Personal and Household Goods	2,541.9	2,667.7	3,050.0	2,972.3	3,421.8
Outerwear, except knitted	391.5	383.4	487.7	539.4	626.6
Outerwear, knitted	268.6	263.7	315.6	305.5	401.7
Other apparel and apparel accessories	223.8	209.8	234.7	223.5	264.4
Footwear	296.2	323.2	385.0	383.6	417.1
Watches, clocks, jewellery and silverware	231.6	235.7	261.6	205.6	223.0
Sporting and recreation equipment	206.4	216.8	255.3	242.8	254.4
Games, toys and children's vehicles	176.1	179.0	215.6	283.4	296.5
House furnishings	158.4	182.2	218.0	167.3	211.0
Kitchen utensils, cutlery and tableware	244.3	291.5	304.6	281.7	321.1
Other personal and household goods	345.0	382.4	371.9	339.5	406.0
Miscellaneous End Products	3,215.7	3,653.5	4,072.0	3,927.7	4,330.0
Medicinal and pharmaceutical products	177.3	225.7	238.8	267.6	327.2
Medical, ophthalmic and orthopedic supplies	293.0	335.7	370.2	397.4	467.1
Newspapers, magazines and periodicals	264.3	285.4	321.9	380.8	401.7
Books and pamphlets	354.1	394.3	447.6	488.7	535.4
Other printed matter	198.3	230.9	245.2	253.0	276.4

## 21.9 Imports into Canada from all countries on a customs basis, by section and commodity, 1979-83 (million dollars) (concluded)

Section and commodity	1979	1980	1981	1982	1983
Stationers' and office supplies	147.9	154.6	194.9	167.1	189.3
Unexposed photographic films and plates	219.3	293.0	278.9	279.6	318.6
Other photographic goods	479.3	551.7	650.0	600.9	620.8
Containers and closures	227.5	224.7	238.0	291.2	315.7
Other end products, inedible	854.6	957.5	1,086.5	801.4	877.8
<b>SPECIAL TRANSACTIONS - TRADE</b>	<b>566.8</b>	<b>762.1</b>	<b>928.6</b>	<b>1,013.2</b>	<b>980.1</b>
<b>Total, imports</b>	<b>62,870.7</b>	<b>69,273.8</b>	<b>79,481.7</b>	<b>67,855.7</b>	<b>75,586.6</b>

## 21.10 Value of total exports from Canada to all countries on a customs basis, by section and commodity, 1979-83 (million dollars)

Section and commodity	1979	1980	1981	1982	1983
<b>LIVE ANIMALS</b>	<b>245.6</b>	<b>254.0</b>	<b>229.7</b>	<b>326.0</b>	<b>342.3</b>
<b>FOOD, FEED, BEVERAGES AND TOBACCO</b>	<b>6,111.2</b>	<b>8,065.3</b>	<b>9,273.0</b>	<b>9,953.1</b>	<b>10,135.9</b>
Meat, fresh, chilled or frozen	411.7	501.2	603.5	750.8	658.6
Other meat and meat preparations	20.3	22.1	27.1	35.0	46.0
Fish, whole or dressed, fresh or frozen	246.3	239.6	278.2	331.1	261.4
Fish, fillets and blocks, fresh or frozen	395.3	407.7	461.2	515.3	502.1
Fish, preserved, except canned	108.2	141.1	179.6	175.8	134.7
Fish, canned	79.1	109.3	145.2	105.5	133.5
Shellfish	464.9	367.5	429.6	463.7	534.1
Dairy produce, eggs and honey	145.1	198.2	250.1	317.4	273.5
Barley	528.3	404.2	846.4	886.3	814.6
Wheat	2,180.3	3,861.7	3,728.0	4,288.9	4,647.7
Other cereals, unmilled	88.5	257.2	343.6	216.0	195.7
Hard spring wheat flour	140.2	113.8	186.8	75.5	80.7
Other cereals, milled	71.7	119.1	144.3	145.7	143.2
Cereal preparations	67.7	82.3	88.3	100.1	109.9
Fruits and fruit preparations	74.6	83.4	110.0	130.6	110.9
Vegetables and vegetable preparations	152.7	219.7	283.5	284.6	292.9
Sugar and sugar preparations	99.3	73.6	133.6	111.8	127.9
Other foods and materials for foods	101.3	111.8	158.9	137.9	144.7
Oilseed cake and meal	36.3	65.2	58.1	37.7	42.2
Other feeds of vegetable origin	98.0	106.7	98.4	99.7	120.6
Other fodder and feed	80.5	87.5	112.9	122.5	135.5
Whisky	298.3	309.1	345.8	337.2	340.7
Other beverages	76.7	100.0	118.3	149.0	164.5
Tobacco	145.9	83.2	141.6	135.0	120.3
<b>CRUDE MATERIALS, INEDIBLE</b>	<b>12,555.0</b>	<b>14,778.1</b>	<b>15,247.0</b>	<b>14,801.0</b>	<b>14,413.2</b>
Raw hides and skins	152.6	116.8	102.8	131.6	131.8
Fur skins, undressed	144.9	161.5	135.0	124.0	94.3
Other crude animal products	20.0	24.1	27.4	33.5	32.7
Seeds for sowing	34.3	34.8	29.6	31.4	48.2
Flaxseed	168.8	137.3	226.4	138.1	186.3
Rapeseed	631.5	421.9	464.5	418.7	433.2
Other oilseeds, oil nuts and oil kernels	63.4	87.0	118.3	92.6	70.1
Other crude vegetable products	78.4	89.0	91.3	105.9	114.5
Pulpwood	15.0	26.0	24.7	8.2	11.5
Pulpwood chips	53.5	90.9	97.7	97.9	89.3
Other crude wood products	77.3	88.6	76.9	120.3	175.7
Textile and related fibres	59.7	77.5	97.9	88.7	99.7
Iron ores and concentrates	1,354.1	1,241.3	1,465.3	1,033.5	972.0
Scrap iron and steel	116.0	102.0	75.5	70.4	82.6
Aluminum ores, concentrates and scrap	81.3	119.5	119.7	78.5	116.7
Copper in ores, concentrates and scrap	548.3	601.0	499.0	397.4	475.7
Lead in ores, concentrates and scrap	123.2	118.2	83.7	39.9	20.2
Nickel in ores, concentrates and scrap	335.8	447.8	533.7	298.7	336.6
Precious metal in ores, concentrates and scrap	319.8	649.3	438.2	317.6	393.9
Zinc in ores, concentrates and scrap	238.9	168.0	277.1	258.7	280.0
Radioactive ores and concentrates	378.9	230.7	179.4	358.6	62.6
Other metals in ores, concentrates and scrap	403.7	538.7	423.4	343.6	167.2
Crude petroleum	2,404.6	2,899.1	2,505.0	2,728.5	3,456.9
Natural gas	2,889.1	3,983.8	4,370.0	4,754.7	3,958.2
Coal and other crude bituminous substances	835.3	933.8	1,147.0	1,269.2	1,312.9
Asbestos, unmanufactured	652.6	631.2	576.8	482.6	454.9
Sulphur	206.6	543.4	809.6	720.1	572.4
Other crude non-metallic minerals	127.5	166.2	199.0	192.2	199.2
Other waste and scrap materials	40.8	48.7	52.1	65.9	63.9

**21.10 Value of total exports from Canada to all countries on a customs basis, by section and commodity, 1979-83 (million dollars) (continued)**

Section and commodity	1979	1980	1981	1982	1983
<b>FABRICATED MATERIALS, INEDIBLE</b>	<b>24,538.4</b>	<b>29,555.8</b>	<b>30,901.0</b>	<b>28,168.9</b>	<b>30,299.7</b>
Leather and leather fabricated materials	33.1	37.8	41.5	38.1	37.4
Lumber, softwood	3,821.0	3,264.8	2,916.4	2,847.6	3,900.8
Lumber, hardwood	81.9	103.5	112.3	106.4	100.9
Shingles and shakes	191.6	178.8	169.7	157.5	232.1
Other sawmill products	16.5	15.6	20.8	15.8	17.5
Veneer	109.6	90.7	90.0	91.4	116.1
Plywood	138.6	146.5	131.7	124.1	141.8
Other wood fabricated materials	196.7	177.4	193.2	189.0	273.3
Wood pulp and similar pulp	3,083.3	3,873.0	3,818.9	3,221.4	3,057.7
Newsprint paper	3,221.9	3,683.8	4,325.5	4,086.2	4,005.1
Other paper for printing	322.6	353.7	341.8	414.1	411.6
Paperboard	129.9	205.8	183.6	133.0	177.0
Other paper	312.2	389.0	368.1	377.2	444.8
Yarn, thread, cordage twine and rope	46.2	70.8	100.0	82.9	91.2
Cotton broad woven fabrics	11.0	17.4	14.3	15.5	16.1
Other broad woven fabrics	66.7	89.5	93.0	78.3	53.0
Other textile fabricated materials	72.0	81.5	90.2	94.4	83.0
Oils, fats, waxes, extracts and derivatives	218.1	250.6	267.1	228.9	184.9
Chemical elements	146.3	160.8	147.9	170.7	187.6
Other inorganic chemicals	841.9	951.4	1,061.9	832.5	789.7
Organic chemicals	720.4	937.2	1,240.4	1,122.6	1,261.8
Fertilizers and fertilizer materials	987.3	1,255.3	1,343.3	1,022.3	1,160.4
Synthetic rubber and plastics materials	371.0	473.2	535.0	525.2	530.3
Plastics, basic shapes and forms	122.5	126.3	154.1	179.8	202.9
Other chemical products	164.8	189.7	221.2	247.2	296.4
Petroleum and coal products	1,897.8	2,325.7	2,657.4	2,545.6	2,816.8
Ferro-alloys	42.1	55.6	73.1	39.2	41.0
Primary iron and steel	111.3	235.2	398.1	189.0	257.5
Castings and forgings, steel	196.5	164.2	188.7	163.6	169.6
Bars and rods, steel	240.0	373.4	301.2	283.6	284.5
Plate, sheet and strip, steel	414.3	592.4	513.7	761.9	458.5
Railway track material	72.1	88.6	80.6	39.8	11.8
Other iron and steel and alloys	548.3	575.2	844.4	546.7	446.6
Aluminum, including alloys	920.0	1,540.7	1,483.9	1,434.3	1,748.8
Copper and alloys	614.0	1,000.4	692.0	542.7	711.4
Lead, including alloys	154.8	137.8	111.1	99.2	83.5
Nickel and alloys	583.7	823.6	697.2	508.2	500.2
Precious metals, including alloys	958.3	2,070.7	1,885.5	1,689.2	1,838.0
Zinc, including alloys	362.2	428.5	485.4	465.9	502.9
Other non-ferrous metals and alloys	75.8	88.8	91.0	84.3	73.1
Metal fabricated basic products	574.9	571.7	642.3	628.7	678.5
Abrasive basic products	121.1	125.6	148.3	122.7	141.9
Other non-metallic mineral basic products	389.6	331.5	339.3	341.7	351.4
Electricity	729.2	773.0	1,122.6	1,119.7	1,228.4
Other fabricated materials, inedible	105.3	127.7	163.3	160.6	181.9
<b>END PRODUCTS, INEDIBLE</b>	<b>22,010.3</b>	<b>23,267.7</b>	<b>27,472.4</b>	<b>31,003.4</b>	<b>35,539.8</b>
Machinery	3,076.6	3,410.3	4,051.1	3,664.6	3,403.5
Engines and turbines, general purpose	155.5	137.7	205.4	213.4	173.1
Electrical generators and motors	91.4	95.0	95.5	92.7	78.4
Other general purpose industrial machinery	382.0	446.3	509.3	518.8	505.5
Materials handling machinery and equipment	293.6	300.9	341.2	294.6	427.9
Drilling, excavating and mining machinery	293.1	414.2	884.4	730.6	563.6
Metalworking machinery	222.3	245.7	281.5	342.8	194.6
Woodworking machinery and equipment	115.4	129.8	119.1	99.5	102.5
Construction machinery and equipment	187.6	150.1	163.2	170.3	165.2
Plastics industry machinery and equipment	130.0	137.8	165.7	163.6	217.9
Pulp and paper industries machinery	122.0	223.3	98.7	98.5	73.0
Other special industry machinery	191.1	209.2	247.4	203.1	241.0
Soil preparation, seeding and fertilizing machinery	91.7	105.2	117.3	89.6	87.3
Combine reaper-threshers and parts	320.7	339.7	262.0	154.2	117.8
Other haying and harvesting machinery	96.6	96.9	88.8	63.1	40.1
Other agricultural machinery and equipment	169.9	165.1	191.2	161.2	177.9
Tractors	213.7	214.4	280.4	268.6	237.7
Transportation and Communication					
Equipment	15,065.5	14,958.6	18,193.7	22,033.0	26,315.2
Railway and street railway rolling stock	420.8	408.1	251.3	405.8	175.7
Passenger automobiles and chassis	4,357.9	4,716.6	5,525.3	7,437.7	9,625.8
Trucks, truck tractors and chassis	2,750.7	2,525.7	2,949.2	3,957.1	4,242.8
Other motor vehicles	373.2	338.6	490.7	383.3	275.2
Motor vehicle engines and parts	835.8	476.8	764.2	1,033.9	1,609.0
Motor vehicle parts, except engines	3,774.0	3,138.6	4,083.4	4,366.1	6,057.2
Ships, boats and parts	296.0	381.9	221.4	320.6	187.3

### 21.10 Value of total exports from Canada to all countries on a customs basis, by section and commodity, 1979-83 (million dollars) (concluded)

Section and commodity	1979	1980	1981	1982	1983
Aircraft, complete with engines	222.6	276.0	521.7	757.2	412.5
Aircraft engines and parts	457.9	555.0	784.4	584.6	590.7
Aircraft parts, except engines	457.9	724.7	713.0	752.4	813.9
Other transportation equipment	272.6	292.0	416.5	517.4	562.5
Televisions and radio sets and phonographs	122.5	98.2	115.4	126.2	153.9
Other telecommunication and related equipment	723.6	1,026.4	1,357.2	1,390.7	1,608.7
Other Equipment and Tools	1,993.5	2,266.4	2,659.1	2,874.2	3,224.4
Heating and refrigeration equipment	97.3	115.7	136.6	140.1	175.9
Cooking equipment for food	23.1	20.6	28.9	28.5	32.1
Electric lighting and distribution equipment	252.8	272.2	292.9	298.3	279.5
Navigation equipment and parts	98.9	113.2	114.8	152.1	197.7
Other measuring, controlling laboratory, medical and optical equipment	278.9	328.3	401.5	489.0	493.1
Hand tools and miscellaneous cutlery	63.7	70.3	62.5	53.5	53.7
Office machines and equipment	810.0	926.1	1,110.2	1,187.8	1,378.5
Other equipment and tools	368.8	420.0	511.8	524.9	613.9
Personal and Household Goods	581.4	689.6	723.3	697.3	661.3
Apparel and apparel accessories	202.9	247.6	277.9	257.2	234.5
Footwear	43.3	40.2	38.5	53.1	49.4
Toys, games, sporting and recreation equipment	105.0	133.4	147.5	135.2	128.9
Other personal and household goods	230.2	268.4	259.4	251.8	248.5
Miscellaneous End Products	1,293.3	1,942.8	1,845.2	1,734.3	1,935.4
Medicinal and pharmaceutical products	77.0	96.1	107.0	124.3	142.4
Medical, ophthalmic and orthopedic supplies	40.8	51.4	72.2	83.3	81.4
Printed matter	159.0	217.3	227.6	260.9	375.0
Photographic goods	164.1	230.1	238.5	236.0	328.7
Firearms, ammunition and ordnance	22.8	30.6	54.6	46.7	75.3
Containers and closures	119.0	140.7	173.7	197.6	220.0
Prefabricated buildings and structures	172.9	153.5	225.9	162.4	129.5
Other end products	537.7	1,023.1	745.7	623.1	583.1
SPECIAL TRANSACTIONS - TRADE	179.8	237.7	688.3	277.8	233.0
Total exports	65,641.2	76,158.6	83,811.4	84,530.2	90,963.9

### 21.11 Value of total imports by geographic region and country on a customs basis, 1979-83 (thousand dollars)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
<b>WESTERN EUROPE</b>					
United Kingdom	1,928,415	1,974,280	2,385,735	1,903,948	1,809,806
Gibraltar	5	376	76	2	—
Ireland	79,840	100,564	117,898	128,787	107,266
Malta	1,514	2,005	2,125	2,679	2,263
Austria	101,799	95,679	90,471	91,891	108,103
Belgium and Luxembourg	241,464	251,194	296,926	263,532	296,024
Denmark	117,782	120,071	159,448	129,023	136,925
Finland	54,117	66,699	97,248	96,424	75,763
France	778,693	772,602	878,587	876,957	840,977
Germany, Federal Republic of	1,558,698	1,455,169	1,609,836	1,383,950	1,576,555
Greece	30,423	30,938	54,148	30,302	44,119
Iceland	5,160	6,053	6,511	4,931	3,234
Italy	635,995	610,520	702,637	724,848	798,389
Netherlands	251,763	263,609	296,455	267,295	349,382
Norway	89,181	80,558	169,137	92,684	313,517
Portugal	49,550	51,676	53,005	43,705	58,337
Spain	177,395	186,600	237,723	190,060	181,945
Sweden	383,521	416,209	445,249	365,764	415,843
Switzerland	323,475	521,900	424,013	429,558	408,161
Total, Western Europe	6,808,790	7,006,702	8,027,228	7,026,340	7,526,609
<b>EASTERN EUROPE</b>					
Albania	54	850	1,260	158	9
Bulgaria	6,302	4,677	3,239	4,705	5,640
Czechoslovakia	67,509	63,381	72,890	60,337	54,443

### 21.11 Value of total imports by geographic region and country on a customs basis, 1979-83 (thousand dollars) (continued)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
German Democratic Republic	9,776	9,620	12,790	9,695	10,117
Hungary	31,215	25,897	31,225	25,531	27,984
Poland	82,778	72,159	73,981	43,562	39,512
Romania	39,469	37,973	46,466	30,479	50,131
Union of Soviet Socialist Republics	64,088	59,482	77,669	41,849	33,252
Yugoslavia	25,788	32,992	30,870	24,002	29,007
<b>Total, Eastern Europe</b>	<b>326,979</b>	<b>307,031</b>	<b>350,390</b>	<b>240,318</b>	<b>250,095</b>
<b>MIDDLE EAST</b>					
Bahrain	—	10	179	1,113	523
Cyprus	487	779	1,463	445	353
Qatar	34	104	2	37	67
United Arab Emirates	905	62,163	63,760	34,266	2,432
Egypt	89,538	10,721	6,604	2,190	98,733
Ethiopia	951	845	1,654	2,440	2,048
Iran	341,119	3,450	2,702	117,183	526,750
Iraq	73,752	280,844	1,081	561	897
Israel	56,309	54,538	51,402	39,765	55,872
Jordan	17	18	8	106	199
Kuwait	106,962	145,898	164,598	769	18,283
Lebanon	609	1,045	426	495	769
Lybia	204	231	149,629	22,675	92
Oman (Muscat)	—	—	—	19	34
Saudi Arabia	1,241,973	2,451,653	2,392,754	731,331	94,044
Somalia	—	6	226	366	—
Sudan	265	1,029	444	831	692
Syria	30	2,543	130	217	50,201
Turkey	12,799	11,258	10,946	11,646	12,809
Yemen, North	—	—	—	8	—
Yemen, South	7	52	114	107	65
<b>Total, Middle East</b>	<b>1,925,961</b>	<b>3,027,187</b>	<b>2,848,072</b>	<b>966,570</b>	<b>864,863</b>
<b>OTHER AFRICA</b>					
Gambia	—	10	—	31	36
Ghana	2,016	5,068	4,906	4,294	3,174
Kenya	15,632	17,773	12,869	13,666	11,417
Malawi	341	476	672	1,020	6,361
Mauritius and Dependencies	3,852	61	65	3,159	6,240
Nigeria	717	41,750	112,011	64,690	192,692
Zimbabwe	—	60	2,176	3,166	6,470
Sierra Leone	2,735	27	—	80	—
South Africa	240,478	355,530	402,723	218,718	194,143
Tanzania	3,376	4,876	5,103	2,687	2,117
Uganda	28	992	455	883	333
Zambia	3	26	3,748	1,927	29
Commonwealth Africa, other	29	97	13,837	8,404	33,054
Algeria	87,274	12,076	394,744	259,614	150,103
Angola	12,805	17,542	—	—	6
Benin	2	4	16	21	14
Cameroon	97	691	492	208	1,290
French Africa, other	3,155	2,924	674	563	593
Gabon	1,568	6,704	12,653	7,515	2,951
Guinea	20,985	39,946	20,369	23,754	19,297
Ivory Coast	6,329	3,177	8,731	12,300	10,450
Liberia	2,277	4,217	772	34	126
Madagascar	588	849	347	242	725
Mauritania	244	6	—	43	2
Morocco	6,768	11,086	15,242	15,393	15,818
Mozambique	4,134	2,198	842	967	301
Portuguese Africa, other	4	5	—	—	15
Senegal	156	1,586	1,786	47	1,285
Spanish Africa	7	42	63	57	—
Togo	48	3	—	96	2
Tunisia	712	282	1,436	392	1,549
Zaire	1,776	8,356	606	14,811	17,011
<b>Total, other Africa</b>	<b>418,136</b>	<b>538,420</b>	<b>1,017,338</b>	<b>658,702</b>	<b>677,684</b>
<b>OTHER ASIA</b>					
Bangladesh	8,481	11,619	7,459	4,875	10,465
Hong Kong	427,223	574,438	674,531	668,839	820,316
India	93,250	94,638	106,704	90,699	101,118
Malaysia	96,284	83,458	99,979	89,193	115,581
Pakistan	11,302	15,386	17,474	16,031	18,526
Singapore	164,086	149,684	174,629	163,562	168,444
Sri Lanka	17,068	17,125	17,467	16,732	21,669
Afghanistan	1,002	184	187	458	209

# 21.11 Value of total imports by geographic region and country on a customs basis, 1979-83 (thousand dollars) (continued)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
Burma	705	165	164	109	292
China, People's Republic of	167,451	155,087	220,013	203,654	245,767
Indonesia	42,108	28,913	36,961	30,269	40,043
Japan	2,158,764	2,795,844	4,056,696	3,526,797	4,409,441
Laos	—	4	11	—	79
Korea, North	442	508	132	11	791,405
Korea, South	462,864	414,382	608,172	586,351	112
Nepal	—	—	—	—	88,290
Philippines	78,285	101,481	108,682	82,219	9,952
Portuguese Asia	4,384	5,202	6,565	6,516	925,451
Taiwan	522,065	557,635	729,142	661,268	60,554
Thailand	31,705	24,688	33,067	33,785	178
Vietnam	16	62	657	161	—
<b>Total, other Asia</b>	<b>4,287,485</b>	<b>5,030,503</b>	<b>6,898,692</b>	<b>6,181,529</b>	<b>7,827,892</b>
<b>OCEANIA</b>					
Australia	461,742	519,860	497,593	443,632	357,487
Fiji	9,410	30,642	12,312	7,741	6,031
New Zealand	135,088	146,950	145,740	140,455	156,571
British Oceania, other	11	3	25	9	4
French Oceania	29	261	521	22	501
Papua, New Guinea	6,416	957	3,429	66	351
United States Oceania	19	19	60	55	243
<b>Total, Oceania</b>	<b>612,715</b>	<b>698,692</b>	<b>659,680</b>	<b>591,980</b>	<b>521,188</b>
<b>SOUTH AMERICA</b>					
Falkland Islands	—	2	—	—	3
Guyana	33,033	35,720	22,465	24,318	19,214
Argentina	65,344	35,884	79,358	58,397	52,917
Bolivia	16,109	16,681	18,406	8,017	16,557
Brazil	313,188	348,136	430,779	482,479	499,958
Chile	55,355	97,104	112,110	119,720	134,158
Colombia	95,834	101,394	83,394	92,257	94,249
Ecuador	57,903	40,642	47,094	51,296	62,035
French Guyana	—	4	—	—	—
Paraguay	14,501	4,541	1,389	1,102	3,689
Peru	48,864	96,246	51,099	33,184	119,627
Suriname	10,422	7,321	8,880	7,476	7,376
Uruguay	10,476	14,238	10,094	10,716	32,767
Venezuela	1,504,552	2,216,800	2,384,920	1,805,016	1,004,453
<b>Total, South America</b>	<b>2,225,581</b>	<b>3,014,713</b>	<b>3,249,988</b>	<b>2,693,978</b>	<b>2,047,003</b>
<b>CENTRAL AMERICA AND ANTILLES</b>					
Bahamas	10,468	38,537	53,504	66,035	50,583
Barbados	8,567	11,509	9,279	6,753	8,133
Belize	1,071	1,752	3,239	5,278	8,759
Bermuda	1,026	1,606	1,768	806	18,828
Jamaica	50,140	49,915	97,531	125,249	109,697
Leeward and Windward Islands	3,159	2,340	1,824	1,284	1,455
Trinidad and Tobago	19,006	11,246	75,129	18,019	9,030
Costa Rica	34,801	35,238	38,993	32,266	62,506
Cuba	106,770	163,472	193,393	94,843	56,287
Dominican Republic	22,740	17,485	17,787	18,363	19,432
El Salvador	27,287	26,911	25,024	20,873	35,026
French West Indies	46	240	104	69	79
Guatemala	16,617	25,078	35,998	23,088	20,823
Haiti	6,643	6,606	7,573	8,579	10,753
Honduras	30,013	39,615	35,464	28,462	35,962
Mexico	208,432	345,403	1,048,634	998,313	1,079,233
Netherlands Antilles	38,661	77,419	45,601	6,659	11,932
Nicaragua	8,688	31,463	52,090	26,648	32,120
Panama	22,965	45,663	25,226	18,262	46,551
Puerto Rico	75,856	102,968	123,415	126,625	146,669
Virgin Islands of the United States	375	314	577	486	1,172
<b>Total, Central America and Antilles</b>	<b>693,331</b>	<b>1,034,780</b>	<b>1,892,153</b>	<b>1,626,960</b>	<b>1,765,030</b>

### 21.11 Value of total imports by geographic region and country on a customs basis, 1979-83 (thousand dollars) (concluded)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
<b>NORTH AMERICA</b>					
Greenland	287	2,078	509	2,891	2,383
St. Pierre and Miquelon	215	95	165	500	520
United States	45,571,224	48,613,642	54,537,500	47,865,936	54,103,299
<b>Total, North America</b>	<b>45,571,726</b>	<b>48,615,815</b>	<b>54,538,174</b>	<b>47,869,327</b>	<b>54,106,202</b>
<b>Total, all countries</b>	<b>62,870,704</b>	<b>69,273,843</b>	<b>79,481,715</b>	<b>67,855,704</b>	<b>75,586,566</b>

In this table a dash indicates that either there was no trade or the amount was less than \$500.

<sup>1</sup>The country classification was designed for purposes of economic geography and does not reflect the views of the Government of Canada on international issues of recognition, sovereignty or jurisdiction.

### 21.12 Value of total exports by geographic region and country on a customs basis, 1979-83 (thousand dollars)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
<b>WESTERN EUROPE</b>					
United Kingdom	2,622,692	3,244,811	3,359,888	2,726,592	2,508,791
Gibraltar	22	97	165	384	128
Ireland	53,272	116,061	140,061	98,622	99,062
Malta	2,578	1,542	3,105	2,393	2,112
Austria	47,649	72,541	60,992	43,352	53,241
Belgium and Luxembourg	687,545	1,001,560	856,432	791,090	714,276
Denmark	86,518	88,691	95,068	86,571	68,547
Finland	55,454	139,268	102,577	113,023	89,234
France	635,461	1,017,445	1,008,832	755,325	654,105
Germany, Federal Republic of	1,384,700	1,667,941	1,321,340	1,285,049	1,181,723
Greece	78,956	129,735	76,202	76,969	49,444
Iceland	6,124	8,286	9,839	6,389	5,611
Italy	737,685	1,004,055	928,386	704,505	569,307
Netherlands	1,091,547	1,441,778	1,207,871	1,060,296	975,656
Norway	280,274	349,249	428,149	256,292	246,152
Portugal	68,729	101,212	93,233	122,003	61,204
Spain	221,390	234,842	207,693	195,797	144,548
Sweden	179,137	285,925	233,011	199,621	153,493
Switzerland	202,828	387,411	271,825	246,215	258,172
<b>Total, Western Europe</b>	<b>8,442,561</b>	<b>11,292,450</b>	<b>10,404,669</b>	<b>8,770,488</b>	<b>7,834,806</b>
<b>EASTERN EUROPE</b>					
Albania	97	100	1	131	50
Bulgaria	9,368	7,339	12,178	8,415	7,696
Czechoslovakia	36,182	128,091	28,238	31,507	15,266
German Democratic Republic	35,979	10,605	4,455	21,552	202,443
Hungary	14,377	10,981	11,936	13,772	15,202
Poland	276,226	357,403	332,953	359,608	45,860
Romania	32,290	22,633	9,372	4,576	18,999
Union of Soviet Socialist Republics	776,231	1,540,415	1,867,446	2,073,726	1,764,582
Yugoslavia	54,295	70,176	84,631	76,676	52,373
<b>Total, Eastern Europe</b>	<b>1,235,045</b>	<b>2,147,743</b>	<b>2,351,210</b>	<b>2,589,963</b>	<b>2,122,471</b>
<b>MIDDLE EAST</b>					
Bahrain	4,000	5,645	5,344	5,587	4,745
Cyprus	13,076	4,905	3,544	16,274	11,851
Qatar	6,049	8,758	13,555	18,609	10,055
United Arab Emirates	32,384	45,792	52,969	54,976	35,232
Egypt	37,251	130,005	132,022	371,400	140,506
Ethiopia	3,297	19,658	37,390	14,130	28,869
Iran	22,504	41,971	22,620	183,277	209,512
Iraq	104,983	153,419	311,098	193,403	117,156
Israel	116,765	115,292	132,022	134,419	132,624
Jordan	11,541	14,074	16,954	23,835	12,902
Kuwait	66,516	71,591	83,339	97,110	65,922
Lebanon	37,251	40,830	53,325	37,167	14,648
Lybia	37,012	73,301	112,221	119,889	78,693
Oman (Muscat)	1,304	3,366	13,868	22,276	9,110

### 21.12 Value of total exports by geographic region and country on a customs basis, 1979-83 (thousand dollars) (continued)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
Saudi Arabia	253,591	313,407	460,757	446,890	369,363
Somalia	1,075	2,038	3,590	3,800	823
Sudan	9,340	8,033	10,763	14,331	16,300
Syria	11,578	20,934	5,887	4,006	80,386
Turkey	46,450	41,094	74,974	110,647	104,370
Yemen, North	2,009	133	254	1,470	554
Yemen, South	15,333	31,352	1,309	2,198	2,032
<b>Total, Middle East</b>	<b>833,309</b>	<b>1,145,598</b>	<b>1,547,805</b>	<b>1,875,694</b>	<b>1,445,653</b>
<b>OTHER AFRICA</b>					
Gambia	60	207	43	155	84
Ghana	32,795	24,044	21,463	10,249	22,643
Kenya	19,498	14,765	28,037	25,142	13,050
Malawi	2,220	21,048	1,310	1,604	1,066
Mauritius and Dependencies	2,323	882	1,076	688	393
Nigeria	50,570	105,126	101,669	64,499	50,791
Zimbabwe	130	607	6,862	6,899	4,691
Sierra Leone	618	873	1,177	350	910
South Africa	109,564	205,751	261,641	231,606	171,474
Tanzania	34,822	23,612	17,960	22,383	17,493
Uganda	1,964	183	491	487	3,090
Zambia	3,104	11,932	3,831	6,483	3,184
Commonwealth Africa, other	4,311	1,991	3,451	1,065	3,979
Algeria	215,009	393,557	379,970	500,268	449,303
Angola	833	2,381	2,289	988	3,537
Benin	20,476	3,410	2,567	912	697
Cameroon	9,904	13,248	80,683	31,303	19,008
French Africa, other	12,143	8,487	12,866	8,367	12,907
Gabon	1,303	3,148	4,256	2,590	1,002
Guinea	592	1,905	734	886	1,322
Ivory Coast	33,788	18,888	21,225	4,475	3,188
Liberia	52,861	5,171	12,534	4,824	4,451
Madagascar	1,372	23,610	16,414	2,426	1,879
Mauritania	8,262	966	2,961	2,110	3,986
Morocco	67,751	70,936	104,114	104,780	59,514
Mozambique	17,435	14,125	19,675	28,750	10,516
Portuguese Africa, other	204	2,617	514	1,897	447
Senegal	17,147	8,250	13,901	11,797	19,399
Spanish Africa	27,363	1,511	22,180	13,817	373
Togo	8,697	1,327	818	1,706	5,015
Tunisia	39,706	58,641	74,306	74,151	47,393
Zaire	4,511	31,208	51,689	23,400	13,036
<b>Total, other Africa</b>	<b>801,336</b>	<b>1,074,407</b>	<b>1,272,707</b>	<b>1,191,057</b>	<b>949,821</b>
<b>OTHER ASIA</b>					
Bangladesh	79,244	74,663	56,589	120,728	114,759
Hong Kong	141,604	199,035	190,689	265,493	229,298
India	226,666	359,435	348,218	290,600	262,733
Malaysia	69,648	95,305	127,086	125,256	119,742
Pakistan	88,458	58,949	92,045	104,613	69,670
Singapore	118,046	201,611	149,280	154,548	130,102
Sri Lanka	12,986	28,630	34,471	17,432	53,042
Afghanistan	1,048	345	171	226	67
Burma	2,696	3,494	2,869	4,745	1,568
China, People's Republic of	605,434	873,663	1,019,556	1,232,070	1,609,033
Indonesia	62,960	215,950	95,463	207,853	214,760
Japan	4,099,624	4,373,507	4,521,817	4,589,906	4,761,768
Laos	551	25	36	8	38
Korea, North	1,773	18	—	72	1,244
Korea, South	367,070	512,384	446,874	487,687	564,069
Nepal	—	—	—	—	1,213
Philippines	89,050	86,157	84,681	101,731	77,495
Portuguese Asia	164	6	212	45	52
Taiwan	105,447	253,834	236,996	304,730	345,910
Thailand	88,507	142,388	117,602	146,355	148,405
Vietnam	22,519	358	1,002	330	1,204
<b>Total, other Asia</b>	<b>6,183,495</b>	<b>7,479,757</b>	<b>7,525,657</b>	<b>8,154,428</b>	<b>8,706,172</b>
<b>OCEANIA</b>					
Australia	569,217	678,719	827,699	697,756	468,656
Fiji	2,052	3,842	2,787	2,290	2,861
New Zealand	92,320	114,902	141,556	159,150	125,601
British Oceania, other	208	458	445	1,129	245
French Oceania	1,366	4,600	5,644	1,938	1,490
Papua, New Guinea	12,443	2,499	14,929	22,764	9,430
United States Oceania	1,893	3,263	1,927	4,283	1,688
<b>Total, Oceania</b>	<b>679,499</b>	<b>808,283</b>	<b>994,987</b>	<b>889,310</b>	<b>609,971</b>

## 21.12 Value of total exports by geographic region and country on a customs basis, 1979-83 (thousand dollars) (concluded)

Region and country <sup>1</sup>	1979	1980	1981	1982	1983
<b>SOUTH AMERICA</b>					
Falkland Islands	17	13	1	184	20
Guyana	12,604	15,841	19,136	12,742	4,292
Argentina	287,063	232,181	177,664	92,158	98,309
Bolivia	6,113	7,286	10,412	9,195	3,804
Brazil	426,845	962,278	690,113	546,109	625,263
Chile	94,764	112,403	124,191	68,173	71,377
Colombia	97,680	236,041	201,823	225,515	230,911
Ecuador	49,483	84,503	96,265	65,402	48,391
French Guyana	140	255	59	533	22
Paraguay	2,066	4,132	3,017	943	1,235
Peru	43,972	56,724	93,685	110,316	85,250
Suriname	4,728	5,021	5,822	4,518	3,607
Uruguay	11,495	17,831	18,416	13,818	6,650
Venezuela	674,537	679,522	829,193	672,731	309,620
<b>Total, South America</b>	<b>1,711,507</b>	<b>2,414,031</b>	<b>2,269,797</b>	<b>1,822,337</b>	<b>1,488,751</b>
<b>CENTRAL AMERICA AND ANTILLES</b>					
Bahamas	33,032	25,367	31,594	29,664	30,458
Barbados	31,018	34,778	42,585	33,865	40,399
Belize	5,517	3,996	3,717	2,343	2,067
Bermuda	75,414	29,587	38,830	36,076	30,933
Jamaica	63,557	65,539	82,831	71,513	67,511
Leeward and Windward Islands	23,068	29,130	34,900	33,927	33,421
Trinidad and Tobago	130,566	123,742	109,559	145,961	155,625
Costa Rica	35,932	30,401	22,468	16,296	22,408
Cuba	257,857	425,160	453,722	324,910	362,920
Dominican Republic	34,209	53,732	49,432	51,415	46,758
El Salvador	15,744	15,627	19,705	15,261	18,621
French West Indies	1,913	5,416	3,322	3,916	2,269
Guatemala	21,833	22,236	18,553	34,253	15,918
Haiti	31,740	26,839	21,871	23,674	15,241
Honduras	16,519	24,046	21,251	15,428	11,576
Mexico	242,764	494,996	734,187	455,894	382,411
Netherlands Antilles	16,611	11,028	27,529	35,321	10,769
Nicaragua	2,896	15,143	16,813	15,663	16,009
Panama	33,319	55,598	52,413	47,957	30,835
Puerto Rico	110,889	94,865	106,215	99,949	122,930
Virgin Islands of the United States	6,141	4,470	39,646	21,771	26,418
<b>Total, Central America and Antilles</b>	<b>1,190,539</b>	<b>1,591,696</b>	<b>1,931,143</b>	<b>1,515,057</b>	<b>1,445,497</b>
<b>NORTH AMERICA</b>					
Greenland	10,032	10,850	5,405	6,090	3,774
St. Pierre and Miquelon	19,261	20,062	20,980	30,806	24,466
United States	44,534,675	48,173,723	55,487,120	57,685,021	66,332,528
<b>Total, North America</b>	<b>44,563,972</b>	<b>48,204,635</b>	<b>55,513,505</b>	<b>57,721,917</b>	<b>66,360,768</b>
<b>Total, all countries</b>	<b>65,641,259</b>	<b>76,158,600</b>	<b>83,811,480</b>	<b>84,530,251</b>	<b>90,963,910</b>

In this table a dash indicates that either there was no trade or the amount was less than \$500.

<sup>1</sup>The country classification was designed for purposes of economic geography and does not reflect the views of the Government of Canada on international issues of recognition, sovereignty or jurisdiction.

### 21.13 Receipts and payments on travel between Canada and other countries, selected years (million dollars)

Country	1974	1976	1978	1980	1981	1982	1983
United States							
Receipts	1,328	1,346	1,650	2,121	2,491	2,402	2,664
Payments	1,196	1,956	2,553	2,920	3,208	3,234	3,903
Balance	132	-610	-903	-799	-717	-832	-1,239
Other countries							
Receipts	366	584	728	1,228	1,269	1,322	1,177
Payments	782	1,165	1,531	1,657	1,668	1,774	2,142
Balance	-416	-581	-803	-429	-399	-452	-965
All countries							
Receipts	1,694	1,930	2,378	3,349	3,760	3,724	3,841
Payments	1,978	3,121	4,084	4,577	4,876	5,008	6,045
Balance	-284	-1,191	-1,706	-1,228	-1,116	-1,284	-2,204

### 21.14 Canadian official development assistance, 1978-79 to 1982-83 (million dollars)

Program	1978-79	1979-80	1980-81	1981-82	1982-83
Multilateral	490.27	498.30	508.79	545.59	594.52
General UN funds	46.81	49.96	50.20	58.10	68.69
Renewable natural resources	18.77	19.20	8.24	23.19	12.58
Population and health	10.45	10.40	8.50	10.64	11.95
Education	0.33	0.51	0.40	0.15	0.15
Commonwealth and francophone programs	9.28	10.47	11.87	13.18	14.82
Refugee and relief	7.49	9.43	8.80	12.26	13.72
Trade promotion	0.60	0.60	0.60	0.66	0.75
International financial institutions	284.93	281.99	295.41	296.43	325.18
World Food Program	94.54	94.58	103.32	108.96	117.55
Contributions to regular budgets and voluntary funds by External Affairs and other departments	16.20	20.29	20.30	20.60	26.71
Other multilateral	0.87	0.87	1.15	1.42	2.42
Bilateral	559.41	598.79	581.51	671.36	716.05
Africa	238.66	285.67	274.39	314.78	332.56
America	80.92	66.18	52.16	73.33	57.76
Asia	227.05	234.62	223.29	256.68	305.97
Europe	4.28	3.40	19.00	11.84	0.06
Oceania	0.12	0.42	0.61	0.95	0.95
Miscellaneous	8.38	8.50	12.02	13.78	18.75
Other programs	116.22	191.76	216.21	280.50	370.27
Canadian non-governmental organizations	63.26	70.95	80.96	108.35	147.47
International non-governmental organizations	7.53	7.17	8.75	12.11	17.93
International Development Research Centre	35.79	35.66	39.81	45.89	53.56
International emergency relief	5.00	19.00	12.97	18.17	25.08
Petro-Canada International Assistance Corp.	—	—	—	—	17.55
Scholarship programs	2.63	2.76	2.87	3.84	4.20
Miscellaneous programs	2.01	4.72	8.21	15.37	17.66
Administrative costs	1	51.50	62.64	76.77	86.82
Total aid	1,165.90	1,288.85	1,306.51	1,497.45	1,680.84

<sup>1</sup>Administrative costs have been included in the aid total, beginning with the 1979-80 fiscal year, in accord with the normal pattern followed by the OECD development assistance committee (DAC).

### 21.15 Department of National Defence expenditures, by province and outside Canada (million dollars)

Province or territory	1978-79	1979-80	1980-81	1981-82	1982-83
Newfoundland	30.3	31.3	37.7	42.0	46.5
Prince Edward Island	34.5	35.7	40.0	41.4	43.4
Nova Scotia	489.4	496.3	605.4	624.0	712.4
New Brunswick	160.6	155.9	187.3	182.7	213.1
Quebec	628.3	628.5	748.4	945.4	1,087.3
Ontario	1,199.8	1,329.6	1,529.1	1,883.3	1,951.4
Manitoba	171.1	186.2	212.9	261.9	265.8
Saskatchewan	59.4	63.0	73.9	73.1	80.1
Alberta	255.4	273.9	327.0	363.2	398.9
British Columbia	348.7	350.7	409.9	472.4	548.2
Yukon	0.2	0.2	0.3	0.6	1.0
Northwest Territories	13.7	14.3	18.3	17.7	24.1
Total, Canada	3,391.5	3,565.8	4,190.2	4,907.7	5,372.2
Outside Canada	716.6	823.5	886.9	1,120.0	1,619.8
Total	4,108.0	4,389.3	5,077.1	6,027.7	6,992.0

### 21.16 Canadian Armed Forces strength, selected years

Fiscal years ending March 31	Navy	Army	Air Force	Canadian Armed Forces	Total
1962	21,500	51,855	53,119	...	126,474
1969	18,291	37,445	42,604	...	98,340
1972	15,388	32,212	37,333	...	84,933
1976	7,599	18,295	21,943	31,901	79,738
1978	6,501	15,500	18,700	40,436	81,137
1979	5,952	14,212	17,209	43,218	80,591
1980	5,437	13,032	15,771	46,058	80,299
1981	4,943	11,832	14,284	49,802	80,861
1982	4,543	10,671	12,992	54,652	82,858
1983	4,188	9,899	12,089	56,729	82,905

#### Sources

- 21.1 Domestic Information Services Division, Department of External Affairs.
- 21.2 - 21.12 External Trade Division, Statistics Canada.
- 21.13 Education, Culture and Tourism Division, Statistics Canada.
- 21.14 Public Affairs Branch, Canadian International Development Agency.
- 21.15 - 21.16 Parliamentary Affairs Division, Department of National Defence.



CHAPTER 22.

---

# GOVERNMENT FINANCE



## UPDATE

---

In 1982-83 gross general expenditure by the federal government jumped to \$94 billion, 20% higher than in 1981-82. This included increases of 29% in spending for social services (particularly unemployment insurance and payments to the elderly), 27% for transportation and communications, 15% for protection of people and property, 14% in resource conservation and industrial development and 12% in debt charges.

At the same time, gross general revenue increased by only 2% to \$74.3 billion. Revenue from corporation income taxes dropped 12%. General sales taxes fell 5% mainly because of lower demand for durable goods and building materials as well as smaller capital investment in machinery and equipment. Customs import duties fell nearly 18%.

Thus in 1982-83 the federal deficit was \$19.7 billion, more than three times that of 1981-82.

Increased expenditures for interest payments reflected growth of the unmatured federal debt from \$92.3 billion in 1981-82 to \$115.5 billion in 1982-83.

## CHAPTER 22

---

# GOVERNMENT FINANCE

<b>22.1</b>	<b>Review of revenue and expenditure</b>	<b>711</b>
22.1.1	Gross general revenue	711
22.1.2	Gross general expenditure	712
22.1.3	Consolidated government finance	713
22.1.4	General accounts	713
<b>22.2</b>	<b>Federal financial operations and control</b>	<b>713</b>
22.2.1	Financial administration	713
22.2.2	Sources of revenue	715
22.2.3	The auditor general	717
<b>22.3</b>	<b>Federal-provincial fiscal relations</b>	<b>717</b>
22.3.1	Fiscal arrangements	717
<b>22.4</b>	<b>Tax rates</b>	<b>718</b>
<b>22.5</b>	<b>Provincial government finance</b>	<b>718</b>
22.5.1	Provincial taxes	718
<b>22.6</b>	<b>Local government finance</b>	<b>719</b>
22.6.1	Local taxes	719

## TABLES

---

22.1	Consolidated government finance	721
22.2-22.7	Federal government finances	722
22.8-22.14	Tax statistics	726
22.15, 22.16	Excise taxes	729
22.17, 22.18	Provincial and territorial liabilities	730
22.19	Bonds and debentures	731
22.20	Federal transfer payments	731
22.21, 22.22	Provincial and territorial finances	732
22.23-22.25	Finances of local governments	733
22.26	Government employment and payrolls	735

---

## CHAPTER 22

# GOVERNMENT FINANCE

Statistics Canada produces two sets of data on government finance: **estimates data** derived from the budgets and financial estimates of the various levels of government, and **actual data** derived from audited public accounts after they are published.

The estimates data are less detailed but apply to the current fiscal year and are available on CANSIM (Canadian Socio-economic Information Management System) Statistics Canada's machine-readable data base. In this electronic form they can be readily revised and are updated as soon as information becomes available. In a fiscal year, which in the federal, provincial and territorial governments runs from April 1 to March 31 of the following calendar year, the current information is available by July. Data on local governments are compiled for the calendar year from budgets and other sources and are also released through CANSIM. Beginning in 1985-86, the information available will include revenue and expenditure forecasts for federal, provincial and territorial, and local governments plus a consolidation of all three levels.

The actual data are extracted from audited public accounts of the various jurisdictions and are issued in printed reports. The preparation and release dates of these publications depend on the availability of public accounts information from each level of government.

Both of these sets of data are produced in accord with the financial management system (FMS) of government statistics. Only through use of FMS-based data can accurate comparisons be made between governments or between levels of government. FMS data are also used to calculate equalization payments and other federal-provincial financial arrangements.

*The system of government financial management statistics* (Statistics Canada 68-507) reflects changes in government operations and changes in statistical formats implemented since the system was last updated in 1972. For example, a number of new taxes are now identified particularly in the area of natural resources.

The FMS conceptual framework is the basis employed in preparing statistical information for the annual consultation between federal and provincial ministers of finance, pertaining to the co-ordination of budgetary policies.

Statistics Canada has been publishing financial data for the three levels of government according to the concepts and classifications of the FMS for over 60 years. Efforts are currently under way to expand the scope of the financial management system to include non-government institutions such as universities, hospitals and cultural agencies, which constitute a major portion of the public sector.

This chapter is based on the actual data as published. Users wanting more current information should access the CANSIM data.

## 22.1 Review of revenue and expenditure

Gross general revenue of the federal government amounted to \$72.5 billion and gross general expenditure to nearly \$78.8 billion in 1981-82, thus showing an excess of expenditure over revenue of over \$6.2 billion on a financial management basis. Tables 22.2 and 22.3 provide summaries for the fiscal years ending March 31, 1978-82.

### 22.1.1 Gross general revenue

Gross general revenue (Table 22.2), increased by \$14.2 billion (24.3%) in 1981-82. The major portion (96%) of the increase can be attributed to a growth in the yield from the following sources: miscellaneous taxes, up \$5.5 billion (200.6%); income taxes, up \$4.1 billion (13.5%); health and social insurance levies, up \$2.0 billion (34.5%); consumption taxes, up \$1.1 billion (10.4%); and return on investments, up \$858 million (19.9%).

**Miscellaneous taxes.** The increase in miscellaneous taxes was mainly due to substantial growth in the yield from the petroleum levy (up nearly \$2.4 billion), the natural gas and gas liquids tax (\$811 million) and the new petroleum and gas revenue tax (\$811 million).

The petroleum levy consists of the petroleum compensation charge which is in essence an expanded syncrude levy. The syncrude levy started in January 1979 and was originally imposed on domestic petroleum, imported petroleum and designated petroleum products to compensate refiners using oil from the Athabasca Tar Sands. It was replaced in the fall of 1981 by the petroleum compensation charge which, in contrast to the

previous levy, was imposed on all crude entering Canadian refineries, based on a blended average price of domestic and foreign conventional oil and the cost of domestic oil qualifying for the new oil reference price (NORP), including synthetic crude, tertiary oil, upgraded heavy oil and oil discovered since 1980. It was designed to subsidize qualified refiners to bring their net cost down to the conventional old oil price plus the petroleum compensation charge.

The natural gas and gas liquids tax was levied under the Excise Tax Act effective November 1, 1980; it was imposed on natural gas acquired by distributors for resale to consumers in Canada and on natural gas liquids (ethane, propane and butane) when first removed from a gas processing plant.

The petroleum and gas revenue tax, effective January 1, 1981, was imposed on production revenue from petroleum and gas operations and on resource royalty payments related to such production.

**Income taxes.** The yield from income taxes represented 47.3% of total gross general revenue in 1981-82, down from 51.9% in 1980-81. The decline of the ratio was due to: a slowdown in the rate of growth of personal income taxes, 18.5% in 1981-82 compared to 18.7% in the previous year, mainly because of a decrease in child tax credit; and a downturn in corporation income taxes which declined from 17% to -0.1% because of falling business profits. This was offset to some extent by an increase of 17.4% in income taxes on payments to non-residents due to increased outflow of investment income and dividends.

**Health and social insurance levies** accounted for 14% of the growth in total revenue in 1981-82, up from 10% in 1980-81, mainly as a result of an increase of nearly \$1.5 billion (43.9%) in unemployment insurance (UI) contributions and a growth of \$588 million (22.5%) in Canada Pension Plan (CPP) contributions. The growth in UI was due to an increase in employer/employee contributions, while that of CPP was the result of an increased number of taxpayers moving to higher income brackets.

**Consumption taxes** contributed 8% of the increase in gross general revenue in 1981-82, down from 14% in 1980-81. The slowdown in the rate of growth was caused mainly by a lower yield from general sales taxes, tobacco and air transportation taxes and a decline in the yield from motive fuel and other taxes, offset to some extent by increased customs duties.

Table 22.2 provides a summary of some of the more significant revenue sources for the fiscal years ended March 31, 1978-82.

### 22.1.2 Gross general expenditure

Total gross general expenditure (Table 22.3) grew by \$10.9 billion (16.1%) in 1981-82. The major portion (87%) of the increase was due to a growth in outlays on the following functions: debt charges, up \$3.4

billion (36.5%); social services, up \$2.7 billion (12.7%); resource conservation and industrial development, up nearly \$1.3 billion (17.4%); protection of persons and property, up \$1.1 billion (17.6%); general purpose transfers to other levels of government, up \$922 million (21.0%).

**Debt charges.** Compared to the previous year's growth the increase in debt charges more than doubled. This was occasioned principally by a rise of \$3.5 billion (50.2%) in interest payments reflecting an expansion of \$9.2 billion in unmatured debt and a significant upward trend in coupon rates on new issues.

**Social services.** The growth in social services can be attributed primarily to a substantial rise in expenditures on social security, up \$1.6 billion (17.2%) and labour force plans, up \$821 million (17.2%). The growth in social security resulted from increases of \$1.2 billion (15.7%) in old age security payments as a result of a larger number of beneficiaries and a higher basic pension and guaranteed income. There was also an increase of \$456 million (22.5%) in Canada Pension Plan payments due largely to indexation and more beneficiaries. The growth in labour force plans was caused principally by a rise of \$816 million (17.2%) in unemployment insurance transfer payments to persons as a result of increases in both the average weekly benefit and the number of weeks of benefit paid.

**Resource conservation and industrial development.** The increase can be attributed to a rise in expenditures on agriculture, trade and industry and oil and gas. The growth in agriculture was the result of increased expenditure on goods and services and a rise in the amount of transfer payments under the agri-food development program. The increase in trade and industry was the consequence of a rise in grants and contributions for industry development by the department of industry, trade and commerce. In oil and gas the growth was in transfer payments to business under the federal energy program with respect to oil import compensation and oil substitution conservation assistance; this was offset to some extent by a decrease in compensation paid by a petroleum compensation revolving fund to first refiners of designated classes of high-cost domestic petroleum, because the gap was closing between its price and international crude price levels.

**Protection of persons and property.** This growth was caused principally by an increase of \$901 million (18.3%) in national defence for increased capital expenditures and salaries and wages (including military pay and allowances). Spending on policing and correction increased by \$137 million (18.7%) and on rehabilitation by \$73 million (18.2%) as a result of increases in the police services under contract in law enforcement and in operating expenditures of correctional services of the department of the solicitor general.

**General purpose transfers.** The substantial rise in general purpose transfers was due largely to an increase of \$888 million (24.7%) in fiscal equalization payments. The percentage increases were: Newfoundland, 20.5%, Prince Edward Island, 24.1%, Nova Scotia, 22.1%, New Brunswick, 31.5%, Quebec, 29.8%, Manitoba, 0.2% and Saskatchewan, 41.4%. The main reason for the increase in equalization payments was a growth of prior period adjustments.

Table 22.3 provides an analysis of some of the more significant functions of expenditure for the years ended March 31, 1979-82.

### 22.1.3 Consolidated government finance

Data on each level of government — federal, provincial and local — constitute the basis of the intergovernment consolidation which is presented for the years 1977 to 1979 in Table 22.1. The consolidation process integrates the separate levels of government to reveal the fiscal framework of the public sector viewed as an economic unit. As a result, the numerous intergovernmental transactions either as revenue or as expenditure are eliminated in order to obtain a measure of the collective impact of all government transactions upon the rest of the economy, in terms of services provided and taxes collected.

### 22.1.4 General accounts

Tables 22.2 - 22.5 and 22.20 present financial statistics of the federal government prepared in accordance with the concepts published in *The Canadian system of government financial management statistics* (Statistics Canada 68-506). Financial statistics in Tables 22.7, 22.8 and 22.15 are extracted directly from the *Public accounts of Canada*.

Table 22.4 provides details of the assets and liabilities of the federal government as at March 31, 1979 to 1982. Table 22.5 analyzes gross bonded debt according to average interest rate, average term of issue and place of payment as at March 31, 1979 to 1982.

In addition to direct gross bonded debt, the federal government has assumed certain contingent liabilities. The major categories of this indirect or contingent debt are the guarantee of insured loans under the National Housing Act and the guaranteed bonds and debentures of Canadian National Railways. The remainder consists chiefly of guarantees of loans made by chartered banks to the Canadian Wheat Board, to farmers and to university students and of guarantees under the Export Development Act. Table 22.6 provides details of the contingent liabilities of the government as at March 31, 1979 and 1981.

Table 22.7 summarizes the public debt position during the period 1975-82 as to interest and amount outstanding. Details of unmatured debt and treasury bills outstanding and information on new security

issues of the federal government may be found in the *Public accounts of Canada*. They are summarized by standard classification in *Federal government finance* (Statistics Canada 68-211).

## 22.2 Federal financial operations and control

### 22.2.1 Financial administration

The financial affairs of the federal government are administered under the basic principle set out in the Constitution Act, 1867, that no tax shall be imposed and no money spent without the authority of Parliament and that expenditures shall be made only for the purposes authorized by Parliament. The government introduces all money bills and exercises financial control through a budgetary system based on the principle that all the financial needs of the government for each fiscal year ending March 31 should be considered at one time so that both the current and prospective conditions of the public treasury may be clearly evident.

**Estimates and appropriations.** Treasury Board, whose secretariat is a separate department of government under the president of the Treasury Board, co-ordinates the estimates process.

Under a policy and expenditure management system, total government outlays are divided into 10 functional categories or envelopes, and planned levels for spending are established over a five-year horizon. Envelopes consist of the estimated cost of existing programs (A-base projections), and either a positive "policy reserve", or a "negative reserve" if the envelope has been set at a level which requires net reductions in existing programs. Responsibility for program decisions and the allocation of funds within envelopes is delegated to policy committees of cabinet. As well as allocating funds from any policy reserve established when the envelope is initially set, policy committees may add to this reserve through reductions in existing programs. Hence, the system encourages policy committees and departments to review their programs in order to provide funds for new initiatives.

Each year in the spring, departments and agencies submit a multi-year operational plan (MYOP) to the Treasury Board. This document provides detailed information on proposed spending over the planning period for their currently authorized levels of activity (the A-base projections). Departments and agencies also provide the appropriate policy committee of cabinet with a strategic overview which outlines their proposals for change over the planning period.

Based on the multi-year operational plan, the Treasury Board secretariat prepares recommendations for the budgetary and non-budgetary allocations to each program for Treasury Board and cabinet review. Departments are advised of the allocations

approved by cabinet. They then submit an update to the MYOP in the fall to consider technical and policy changes from the spring. At the same time departments also develop separate detailed estimates for their resource requirements for the first or upcoming year of the MYOP. Following review by Treasury Board and approval by cabinet, the MYOP levels for all planning years are updated and the estimates for the upcoming year are tabled in Parliament in February.

The new year main estimates and supplementary estimates are referred to committees of the House of Commons by March 1 of the expiring fiscal year. The committees must report back to the house not later than May 31. Supplementary estimates are referred to standing committees immediately after they are tabled and reporting dates are stipulated.

There are three supply periods that end December 10, March 26 and June 30. The first supplementary estimates for a year are usually dealt with in the December period and the final supplementary estimates in the March period. In addition, interim supply (consisting of 3/12ths for all voted items in main estimates and extra 12ths for some voted items) is dealt with in the March period. In the June period the house is asked to provide full supply on main estimates. In each supply period a number of days are allotted to the business of supply. Opposition motions have precedence over all government supply motions on allotted days, and opportunities to put forward motions of non-confidence in the government are provided. On the last allotted day in each period, the appropriation acts then before the House of Commons must be voted on. These acts authorize payments out of the consolidated revenue fund of the amounts included in the estimates, whether main or supplementary, subject to the conditions stated in them.

**The budget.** The finance minister usually presents a budget speech in the House of Commons some time after the main estimates have been introduced. The budget speech reviews the state of the national economy and the financial operations of the government in the previous fiscal year and gives a forecast of the probable financial requirements for the year ahead, taking into account the main estimates and allowing for supplementary estimates. At the close of his address, the minister tables the formal notices of ways and means motions for any changes in the existing tax rates or rules and customs tariff which, in accordance with parliamentary procedure, must precede the introduction of any money bills. These resolutions give notice of the amendments which the government intends to ask Parliament to make in the taxation statutes. However, if a change is proposed in a commodity tax, such as a sales tax or excise duty on a particular item, it is usually effective immediately; the legislation, when passed, is retroactive to the date of the speech.

The budget speech supports a motion that the house approve in general a budgetary policy of the government; debate on this motion may take up six sitting days. Once it is passed the way is clear for consideration of the budget resolutions. When these have been approved the tax bills are introduced and dealt with in the same manner as all other government financial legislation.

**Revenues.** Administrative procedures for revenues and expenditures are, for the most part, contained in the Financial Administration Act.

The basic requirement for revenues is that all public money shall be paid into the consolidated revenue fund, which is the aggregate of all public money on deposit to the credit of the Receiver General for Canada, who is the supply and services minister. Treasury Board has prescribed detailed regulations for the receipt and deposit of this money. The Bank of Canada and the chartered banks are the custodians of public money. Balances are apportioned among the various chartered banks according to a percentage allocation established by agreement among all the banks and communicated to the finance department by the Canadian Bankers' Association. The daily operating account is maintained with the Bank of Canada and the division of funds between it and the chartered banks takes into account the immediate cash requirements of the government and consideration of monetary policy. The finance minister may purchase and hold securities of, or guaranteed by, Canada and pay for them out of the consolidated revenue fund or may sell such securities and pay the proceeds into the fund. Thus, if cash balances in the fund exceed immediate requirements, they may be invested in interest-earning assets. In addition, the finance minister has established a purchase fund to assist in the orderly retirement of the public debt.

Treasury Board has central control over the budgets of departments and over financial administrative matters generally, principally during the annual consideration of departmental long-range plans and of the estimates. The board also has the right to maintain continuous control over certain types of expenditure to ensure that activities and commitments for the future are held within approved policies, and that the government is informed of and approves any major development of policy or significant transaction that might give rise to public or parliamentary criticism.

To ensure enforcement of the expenditure decisions of Parliament, the government and ministers, the Financial Administration Act provides that no payment shall be made out of the consolidated revenue fund without the authority of Parliament and no charge shall be made against an appropriation except on the requisition of the appropriate minister or a person authorized by him in writing. These

requisitions, which must meet certain standards prescribed by Treasury Board regulation, are presented to the receiver general, who makes the payment.

At the beginning of each fiscal year, or whenever Treasury Board may direct, each department submits a division of each vote included in its estimates into allotments. Once approved, they cannot be varied or amended without the consent of the board. To avoid overexpenditures, commitments due to be paid within a fiscal year are recorded and controlled by the departments concerned. Commitments made under contract that will fall due in succeeding years are recorded since the government must be prepared in the future to ask Parliament for appropriations to cover them. Any unspent amounts in the annual appropriations lapse at the end of the fiscal year, but for 30 days subsequent to March 31 payments may be made and charged to the previous year's appropriations for work performed, goods received or services rendered prior to the end of that fiscal year.

**Public debt.** In addition to collecting and disbursing public money, the government receives and pays out substantial sums in connection with its public debt operations. The finance minister is authorized to borrow money by the issue and sale of securities at whatever rate of interest and under whatever terms and conditions the Governor-in-Council approves. Although new borrowings require specific authority of Parliament, the Financial Administration Act authorizes the Governor-in-Council to approve borrowings, as required, to redeem maturing or called securities. To ensure that the consolidated revenue fund will be sufficient to meet lawfully authorized disbursements, he may also approve the temporary borrowing of necessary sums for periods not exceeding six months. The Bank of Canada acts as the fiscal agent of the government in the management of the public debt.

**Accounts and financial statements.** Under the Financial Administration Act, Treasury Board may prescribe the manner and form in which the accounts of Canada and the accounts of individual departments shall be kept. Annually, on or before December 31 or, if Parliament is not then sitting, within any of the first 15 days after Parliament resumes, the *Public accounts*, prepared by the receiver general, are laid before the Commons by the minister of finance. The *Public accounts* contain a survey of the financial transactions of the fiscal year ended the previous March 31 and statements of revenues and expenditures, assets and direct and contingent liabilities, together with other accounts and information required to show the financial position of Canada. The statement of assets and liabilities is designed to disclose the net debt, which is determined by offsetting against the gross liabilities only those assets

regarded as readily realizable or interest- or revenue-producing. Fixed capital assets, such as government buildings and public works, are charged to budgetary expenditures at the time of acquisition or construction and are shown on the statement of assets and liabilities at a nominal value of \$1.00. Monthly financial statements are also published in the *Canada Gazette*.

## 22.2.2 Sources of revenue

**Individual and corporation taxes.** As shown in Table 22.3, income taxes are the greatest source of gross general revenue for the federal government. Over 89% of individual taxpayers are wage- or salary-earners who have almost the whole of their tax liability deducted at the source by their employers. All other taxpayers are required to pay most of their estimated tax during the taxation year. Thus, the greater part of the tax is collected during the same year in which the related income is earned and only a limited residue remains to be collected when returns are filed. The collections for a given fiscal year include employer remittances of tax deductions, Canada Pension Plan contributions, unemployment insurance premiums and instalments, embracing portions of two or more taxation years, and year-end payments; they cannot therefore be closely related to the statistics for a given taxation year. As little information about a taxpayer is received when the payment is made and as a single cheque from one employer may frequently cover the tax payment of hundreds of employees, the payments cannot be statistically related to taxpayers by occupation or income. Descriptive classifications of taxpayers are available only from tax returns, but collection statistics, if interpreted with the current tax structure and the above factors in mind, indicate the trend of income in advance of final compilation of statistics. The statistics given in Table 22.8 pertain to revenue collections for fiscal years ended March 31, 1976-81.

**Individual income tax.** The federal government has adopted a tax system in which taxpayers volunteer the facts about their incomes and calculate the taxes they must pay. Every individual resident in Canada is liable for the payment of income tax on all his income regardless of where it is earned. A non-resident is liable for tax only on income from sources in Canada. Residence is the place where a person resides or where he maintains a dwelling ready at all times for his use. There are also statutory extensions of the meaning of resident to include a person who has been in Canada for an aggregate period of 183 days in a taxation year, a person who was during the year a member of the armed forces of Canada, an officer or servant of Canada or of any one of its provinces, or the spouse or dependent child of any such person. The extended meaning of resident also includes employees who go from Canada to work under certain international development assistance programs.

Canadian tax law uses the concepts of income and taxable income. Income means income from all sources inside or outside Canada and includes income for the year from businesses, property, offices and employment. Since January 1, 1972, it has also included half of any capital gains.

In computing income, an individual must include benefits from employment, fees, commissions, dividends, annuities, pension benefits, interest, alimony and maintenance payments. Also included are unemployment insurance benefits, family allowance payments, scholarships in excess of \$500, benefits under a disability insurance plan to which his employer contributes and other miscellaneous items of income. A number of items are expressly excluded from income, including certain war service disability pensions, social assistance payments, compensation for an injury or death under provincial worker compensation acts, family income security payments and guaranteed income supplement which is a payment made to individuals over age 65 who have little or no income in addition to their old age pension.

Taxable capital gains are determined by deducting capital losses from capital gains and dividing by two. If losses exceed capital gains, \$2,000 of allowable capital losses may be deducted from other income. Allowable capital losses that are not absorbed in the same year may be carried over to apply in other years. Losses on small business shares can be written off against other income without limit. Capital gains or losses relate to disposition of property. Other gains or losses, for example, resulting from a lottery or gambling, are not included. The sale of personal property at a price not exceeding \$1,000 and the sale of a home do not give rise to a capital gain or loss.

Certain amounts are deductible in computing income. Detailed information is available from Revenue Canada, Taxation.

Individual income tax statistics collected by Revenue Canada, Taxation are presented in Tables 22.9 - 22.12 on a calendar-year basis and are compiled from a sample of all returns received. Taxpayers and amounts of income and tax are shown for selected cities and by occupational class and income classes.

**Corporation income tax.** The Income Tax Act levies a tax upon the worldwide income of corporations resident in Canada and upon the income attributable to operations in Canada of non-resident corporations carrying on business in Canada. Half of capital gains must be included in income. In computing income, corporations may deduct operating expenses such as wages and salaries, costs of goods sold, municipal real estate taxes, reserves for doubtful debts, bad debts and interest on borrowed money.

Statistics on the taxation of corporate income showing a reconciliation of income taxes to taxable

income and book profits are published on an industry basis in *Corporation taxation statistics* (Statistics Canada 61-208). Data for 1978, 1979 and preliminary data for 1981 are summarized for nine industrial divisions in Table 22.9. Taxable income data are also available on a provincial basis, as shown in Table 22.14 for years 1977-80 and 1981 preliminary.

**Excise taxes** collected by Revenue Canada, Customs and Excise are given for the years ended March 31, 1979-82 in Table 22.15.

A drawback of 99% of the duty may be granted when domestic spirits, testing not less than 50% over proof, are delivered in limited quantities for medicinal or research purposes to universities, scientific or research laboratories, public hospitals or health institutions in receipt of federal and provincial government aid.

The Excise Tax Act levies a general sales tax and special excise taxes. These taxes are levied on goods imported into Canada as well as on goods produced in Canada. They are not levied on goods exported.

Some goods are exempt from sales tax. Drugs, electricity, fuels for lighting or heating, all clothing and footwear, foodstuffs and a comprehensive list of energy conservation, transportation and construction equipment are exempt. In addition articles and materials purchased by public hospitals and certain welfare institutions are not subject to sales tax. The products of farms, forests, mines and fisheries are, to a large extent, exempt as is most equipment used in farming and fishing. Machinery and equipment used directly in production, materials consumed or expended in production and equipment acquired by manufacturers or producers to prevent or reduce pollution to water, soil or air from their manufacturing operations are all exempt. A number of items are exempt when purchased by municipalities. These and other exemptions are set forth in the Excise Tax Act.

The Excise Tax Act also imposes a number of special excise taxes in addition to the sales tax. Where these are ad valorem taxes they are levied on the same price or duty-paid value as the general sales tax. Those levied as at December 31, 1981 and 1982 are given in Table 22.16.

**Excise duties.** The excise act levies taxes (referred to as excise duties) upon alcohol, alcoholic beverages other than wines and tobacco products. These duties are not levied on imports but the customs tariff applies special duties to these products equivalent to the excise duties levied on the products manufactured in Canada. Exported goods are not subject to excise duties.

The duties on spirits are on a proof gallon basis. They do not apply to denatured alcohol intended for use in the arts and industries, or for fuel, light or power, or any mechanical purpose. Canadian brandy

(distilled exclusively from juices of native fruits without the addition of sweetening materials) is subject to an excise duty. Excise duties are imposed on tobacco, cigars and cigarettes in addition to the special excise taxes.

**Customs duties.** Many goods imported into Canada are subject to customs duties at various rates. Customs duties once were the chief source of revenue for the country but have declined in importance now providing less than 10% of the total. Apart from its revenue aspects, however, the tariff occupies a place as an instrument of economic policy.

The customs tariff provides for five sets of rates — general preferential, British preferential, most-favoured-nation, general, and United Kingdom and Ireland. The general preferential rates apply to certain goods imported from designated developing countries. For descriptions of the other rates see Chapter 21, External relations, trade and defence.

**Other sources** of gross general revenue for 1978-82 are indicated in Table 22.2.

In all cases where customs duties are applied there are provisions for drawback of duty on imports of materials used in the manufacture of products later exported. These drawbacks assist Canadian manufacturers to compete with foreign manufacturers of similar goods.

### 22.2.3 The auditor general

The government's accounts are subject to an independent examination by the auditor general who is an officer of Parliament. One of his objectives is to make independent examinations of the accounts of federal departments and agencies and of other entities for which he is the appointed auditor, and to express his opinion on their integrity.

Another objective is to make independent examinations and inquiries and report on whether or not there were significant deficiencies in the management control systems and practices, providing reasonable assurance, where possible, that public assets are safeguarded and controlled, that transactions are lawful and proper, and that financial, human and physical resources are managed with economy and efficiency and that procedures are in place to measure and report on the effectiveness of programs.

The auditor general calls attention to anything that he considers should be brought to the attention of the House of Commons, communicates his findings and observations to management of the audited entity and makes any constructive recommendations he may have.

## 22.3 Federal-provincial fiscal relations

Fiscal relations between the federal, provincial and territorial governments are governed either by an act of Parliament or by formal agreements. The Consti-

tution Act, 1867, the Public Utilities Income Tax Transfer Act, and the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977 were the most important legislative measures under which fiscal transfers have been paid by the federal government to the provinces. All of the federal-provincial financial arrangements are now included in an Act to amend the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977, popularly known as the Federal-Provincial Fiscal Arrangements and Federal Health and Education Contributions Act, 1977, passed on June 7, 1984. The current agreement ends March 31, 1987.

### 22.3.1 Fiscal arrangements

This is a term that covers a variety of federal-provincial financial arrangements. Many have existed since Confederation in 1867. Included are various federal-provincial transfers and tax collection agreements.

Federal-provincial transfers include two basic types: general purpose transfers and specific purpose transfers.

**General purpose transfers.** Early general purpose transfers were basically subsidies paid to the provinces under the Constitution Act, 1867 (formerly called the BNA Act). These were per capita payments to ensure that the provinces had sufficient resources to meet their general responsibilities and remain solvent.

Contemporary general purpose transfers are basically equalization payments. The equalization program was begun in 1957 and has been based on a formula negotiated every five years and designed to reduce disparity of fiscal capacity between "have" and "have-not" provinces. From its general revenue, the federal government compensates any province whose per capita revenue is below the national average because of a relative deficiency in the province's tax base. Thus, equalization payments are intended to ensure that all citizens are provided with comparable standards of public services throughout the country.

General purpose transfers now amount to more than \$6 billion annually, with about 90% composed of equalization grants.

Since the beginning of this program in 1957, seven provinces have received equalization payments: Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec, Manitoba and Saskatchewan.

**Specific purpose transfers.** Early specific purpose transfers for programs cost-shared by the federal and provincial governments began in 1912. Through these transfers, the federal government contributed to spending priorities in provincial constitutional jurisdictions. Usually these were specific in purpose, such as for agricultural training, highway construction

or disease control, and were of fixed duration and fixed total value.

Contemporary specific purpose transfers are mainly for large-scale social programs which lie within provincial constitutional jurisdiction but are deemed to be of national importance, of indefinite duration and with high cost, such as health care, social welfare and education.

**Tax collection agreements.** Tax collection agreements originated at the end of World War II. The first agreements were implemented for the years 1947 to 1952, pursuant to the Dominion-Provincial Tax Rental Agreement Act. The 1947 agreements started the series of five-year federal-provincial arrangements, each one modifying and broadening the terms and content of the preceding one. For instance, with the adoption in 1957 of tax sharing arrangements, replacing the tax rental agreements in force since 1942, the federal government initiated an income tax abatement system in favour of the provinces. The 1957 formula, however, was modified by the 1962 agreements so that the provinces could establish their own income tax rates which could be higher or lower than the federal abatement. The federal government undertook to collect for the provinces, with its own income tax, provincial personal and corporation income taxes provided that provincial tax systems were uniform with the federal system. All provinces except Quebec signed the agreements for personal income tax, and all provinces except Quebec and Ontario for corporation income tax. This collection is made at no cost to the provinces except for a small fee for administration of special tax rebates implemented by some provinces.

Generally these agreements are accompanied by revenue guarantees, to prevent a precipitous fall in provincial revenues and hence to strengthen provincial credit ratings.

## 22.4 Tax rates

Taxes are imposed in Canada by the three levels of government. The federal government has the right to raise money by any mode or system of taxation while provincial legislatures are restricted to direct taxation within the province. Municipalities derive their incorporation with its associated powers, fiscal and otherwise, provincially and are thus also limited to direct taxation.

A direct tax is generally recognized as one demanded from the very person who is individually required to pay it. This concept has limited the provincial governments to the imposition of income tax, retail sales tax, succession duties and an assortment of other direct levies. In turn, municipalities acting under provincial legislation tax real estate, water consumption and places of business. The federal government levies taxes on income, excise taxes, excise and customs duties, and a sales tax.

**Provincial taxes and fees.** According to the Constitution Act, 1867, a government cannot levy taxes on another government. However, due to the growing complexities of the economic and commercial transactions of governments, the constitutional provisions for intergovernmental taxation have become increasingly difficult to observe, particularly when government purchases are made through suppliers in the private sector such as retailers and building contractors.

To remove, or at least minimize, the uncertainties and difficulties surrounding the paying of consumption taxes among governments, a set of indexes based on criteria applied to various types of expenditure was devised and is incorporated in the 1977 federal-provincial fiscal arrangements. Under this act the federal government could enter into reciprocal taxation agreements with the provincial governments as of October 1977. Such agreements would run until March 31, 1981, with provisions for renewal. The terms of these agreements also apply to purchases by Crown corporations listed in parts of the Financial Administration Act and the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977. As of February 1977, six provinces had agreed to enter into these reciprocal taxation agreements: Newfoundland, Prince Edward Island, Nova Scotia, New Brunswick, Quebec and Ontario.

## 22.5 Provincial government finance

Because of variation from province to province in administrative structure and, to a lesser extent, in accounting and reporting practices, adjustments are made to financial data reported in public accounts to produce statistics comparable between different provinces and with those for the other levels of government. In 1972 the concepts and classifications of the national system of government financial statistics were redefined (see *The Canadian system of government financial management statistics*, Statistics Canada 68-506). Financial statistics for the years 1971 onward are compiled in accordance with these revisions.

Gross general revenue is given in Table 22.21 and gross general expenditure in Table 22.22, liabilities in Table 22.17, and liabilities of other governments and entities guaranteed by provincial and territorial governments in Table 22.18. More information on outstanding provincial bonds and debentures is in Table 22.19.

### 22.5.1 Provincial taxes

All of Canada's provinces levy a wide variety of taxes, fees, licences and other forms of imposition. Among such levies, a relatively small number account for about 75% of total provincial revenue from own sources. Only the more important levies are briefly described here. Table 22.21 indicates

the amount of revenue derived by provinces and territories from such sources.

**Personal income tax.** All provincial governments levy a tax on the income of individuals who reside within their boundaries and on the income earned by non-residents from sources within those boundaries. Rates of provincial individual income tax are expressed as percentages of basic federal tax, with the exception of Quebec which has its own system. The basic federal tax on which provinces apply their rates is the federal tax after the dividend tax credit but before any foreign tax credit and special federal tax reductions.

**Corporation income tax.** All provinces levy a tax on the taxable income of corporations. In provinces other than Quebec and Ontario, the provincial corporation income tax is imposed on the same basis as that established for federal corporation income tax purposes, and is collected by the federal government under tax collection agreements. In Quebec and Ontario, the determination of corporation taxable income follows closely, but not exactly, the federal rules and each collects its own levy. Corporate taxable income earned in a province is eligible for the 10% federal abatement to compensate corporations for provincial taxes payable. This 10% abatement does not apply to income earned in Yukon where corporate income tax is not imposed.

**Provincial sales tax.** All provinces except Alberta tax at a retail level a wide range of consumer goods and services purchased in or brought into the province. The tax is payable on the selling price of tangible personal property, defined to include certain services, purchased for own consumption or use and not for resale. Each provincial act, however, specifies a number of goods that are exempt. Exemptions include items related mainly to necessities of life and to material used in the farming or fishing industries.

**Gasoline and diesel fuel oil taxes.** Except for Alberta, each province and each territory imposes a tax on the purchase of gasoline and diesel fuel by motorists and truckers and other fuel intended to generate motive power. A number of activities such as farming, fishing, mining or logging are either exempt from motive fuel taxation or are taxed at a preferred rate.

**Tax on mining operations.** With the exception of Prince Edward Island and Alberta all provinces levy some form of tax on profits of mining operations. The tax rates vary considerably depending on the product being mined, and on the size and nature of the profits being taxed.

In addition to taxes on profits of mining operations all provinces have provisions which enable them to receive royalties from the extraction of minerals including oil and gas.

**Motor vehicle licences and fees.** Each province levies a fee on the compulsory registration of a motor vehicle whereupon the vehicle is issued with licence plates. The fees vary from province to province and, in the case of passenger cars, may be assessed on the weight of the vehicle, the wheel base, the number of cylinders of the engine or at a flat rate for specified regions within a province or territory. The fees for commercial motor vehicles and trailers are based on the gross or curb weight for which the vehicle is registered, that is, the weight of the vehicle empty plus the load it is permitted to carry. Every operator or driver of a motor vehicle is required to register periodically and pay a fee for a driver's licence.

**Land transfer taxes.** Ontario levies a tax based on the price at which ownership of land is transferred and a tax on the increase in value on the sale of designated land (all real property except Canadian resource property). Quebec levies a tax on the value of immovable property transferred to non-residents for purposes other than development. Municipalities may levy duties on immovable property transferred. In Alberta, a fee is charged proportional to the registered value of land. British Columbia and Saskatchewan do not have a land transfer tax but have an equivalent in land title fee which is based on land value.

## 22.6 Local government finances

Details for revenue and expenditure are given in Tables 22.23 and 22.24. Preliminary data are given for 1981 and estimates for 1982.

### 22.6.1 Local taxes

For purposes of financial statistics local government is comprised of three principal categories — municipalities, local school authorities and special purpose authorities. Consequently, local taxes are levied by either one of these entities or by all of them depending upon the taxing powers granted to each of them by their respective provincial legislatures. For more than a century, the main source of revenue of local governments has been related to real properties within their jurisdictions. Various taxes have been gradually implemented to supplement the real property tax from which, however, they still derive the bulk of their revenue.

**Local property tax.** Municipalities throughout Canada levy taxes on real properties situated within their boundaries. Generally speaking, they set the rates and collect the proceeds of their own levy and levies made on behalf of other local governments in their area, such as local school authorities. However, in most of Quebec outside the Montréal area and in the unorganized parts of Ontario, school boards levy and collect their own real property taxes directly.

The real property tax rate is generally expressed in mills (rate per \$1,000 of the base) or as a rate per

\$100 of the base. This base is the assessed value of each property. Methods of determining assessed value vary widely not only among the provinces but also among municipalities within a province. However, for taxation purposes, assessed value is considered to be a percentage of actual market value.

**Business taxes.** Among other taxes that municipalities levy, business taxes rank next to the real property tax as a producer of municipal revenue. Such taxes are levied directly on the tenant or the operator of a business. The bases on which business taxes are

levied are very diversified among the provinces. The most common in use are: a percentage of the assessed value of real property, the value of stock-in-trade, the assessed annual rental value of immovables and the area of premises occupied for business purposes.

**Water charges.** In general, municipalities recoup all, or part, of the cost of supplying water through special charges for water consumption. Such charges take various forms such as a charge based on the actual consumption of water, or a water tax based on the rental value of the property occupied.

### Sources

- 22.1 - 22.1.4 Public Institutions Division, Statistics Canada.
- 22.2.1 Communications Division, Treasury Board.
- 22.2.2 Statistics Services Division, Revenue Canada, Taxation; Business Finance Division, Statistics Canada.
- 22.2.3 Communications, Office of the Auditor General.
- 22.3 - 22.3.1 Public Institutions Division, Statistics Canada.
- 22.4 Tax Analysis and Commodity Tax Division, Department of Finance.
- 22.5 - 22.6.1 Public Institutions Division, Statistics Canada.

### Selected references

- The Canadian system of government financial management statistics.* Statistics Canada 68-506 (occasional), Ottawa, September 1972.
- Corporation taxation statistics,* 1981. Statistics Canada 61-208 (annual), Ottawa, May 1984.
- Federal government finance: revenue and expenditure, assets and liabilities,* 1982. Statistics Canada 68-211 (annual), Ottawa, January 1985.
- Federal-provincial programs and activities,* 1983-84, a descriptive inventory. Federal-Provincial Relations Office, Ottawa, May 1984.
- Fiscal federalism in Canada.* Parliamentary task force on federal-provincial fiscal arrangements. House of Commons, Ottawa, 1981.
- Local government finance. Revenue and expenditure, assets and liabilities,* actual 1981. Statistics Canada 68-204 (annual), Ottawa, January 1985.
- Provincial government finance. Revenue and expenditure,* 1981. Statistics Canada 68-207 (annual), Ottawa, May 1984.
- The system of government financial management statistics.* Statistics Canada 68-507, Ottawa 1984.

## TABLES

..	not available	e	estimate
...	not appropriate or not applicable	p	preliminary
—	nil or zero	r	revised
--	too small to be expressed	certain tables may not add due to rounding	

### 22.1 Consolidated government revenue and expenditure, after elimination of intergovernment transfers, fiscal years ended nearest Dec. 31 (million dollars)

Source or function	1977	1978	1979
Consolidated government revenue by source			
Income taxes			
Personal	22,916.8	25,022.6	29,426.2
Corporation	7,935.5	8,807.1	9,985.0
On payments to non-residents	502.7	568.1	787.2
Total, income taxes	31,355.0	34,397.8	40,198.4
Property and related taxes	7,446.0	8,103.0	8,536.4
Consumption taxes			
General sales	9,392.1	9,251.8	10,464.3
Motive fuel	2,266.0	2,160.6	2,202.5
Alcoholic beverages and tobacco	1,765.4	1,944.1	1,998.9
Custom duties	2,312.0	2,747.3	3,000.2
Other	486.7	525.6	615.5
Total, consumption taxes	16,222.2	16,629.4	18,281.4
Health and social insurance levies	7,791.5	8,768.4	9,334.6
Miscellaneous taxes	1,369.3	1,639.9	2,567.4
Natural resource revenue	4,380.3	5,485.3	6,772.7
Privileges, licences and permits	1,189.3	1,599.5	1,710.7
Sales of goods and services	4,015.9	4,982.3	5,750.0
Return on investments	7,084.4	8,473.9	9,992.9
Other revenue from own sources	1,661.6	2,004.3	2,496.9
Total, consolidated revenue	82,515.5	92,083.8	105,641.4
Consolidated government expenditure by function			
General services	6,403.7	6,976.5	7,725.1
Protection of persons and property	7,601.5	8,382.0	9,023.4
Transportation and communications	7,818.0	8,570.2	9,012.3
Health	10,994.9	12,039.2	13,442.2
Social services	20,736.0	22,685.2	24,839.1
Education	13,847.8	14,951.2	16,459.0
Resource conservation and industrial development	5,451.9	5,835.0	8,049.6
Environment	2,491.0	2,689.8	2,741.4
Recreation and culture	2,278.1	2,465.0	2,606.8
Foreign affairs and international assistance	1,114.5	953.3	1,040.4
Debt charges	7,803.7	9,831.1	11,637.1
Other expenditures	4,309.0	5,057.8	5,646.2
Total, consolidated expenditure	90,850.1	100,436.3	112,222.6
Consolidated government revenue less consolidated government expenditure	8,334.6	8,852.5	6,581.2

**22.2 Gross general revenue of the federal government, years ended Mar. 31 (million dollars)**

Source	1978	1979	1980	1981	1982
<b>Taxes</b>					
Income taxes					
Personal	14,110	14,788	17,939	21,296	25,232
Corporation	5,280	5,654	6,951	8,130	8,118
On certain payments to non-residents	503	568	787	867	1,018
Consumption taxes					
General taxes	4,427	4,729	4,698	5,429	6,185
Motive fuel	598	516	420	454	436
Alcoholic beverages	566	576	575	699	773
Tobacco	706	711	727	811	865
Racetrack betting	7	7	7	8	10
Air transportation	77	89	120	166	189
Custom duties	2,312	2,747	3,000	3,188	3,439
Other	79	86	91	96	87
Health and social insurance levies					
Unemployment insurance contributions	2,529	2,799	2,796	3,327	4,787
Universal pension plan levies <sup>1</sup>	1,790	2,064	2,305	2,614	3,202
Miscellaneous taxes					
Taxes on insurance premiums	1	1	1	1	1
Oil export charges	432	328	750	842	963
Petroleum levy	—	89	400	1,393	3,792
Other <sup>2</sup>	248	222	407	487	3,429 <sup>3</sup>
<b>Total, taxes</b>	<b>33,665</b>	<b>35,974</b>	<b>41,974</b>	<b>49,808</b>	<b>62,526</b>
Natural resources	29	38	36	47	105
Privileges, licences and permits	54	50	63	69	77
Sales of goods and services <sup>3</sup>	1,856	2,432	3,041	3,290	3,603
Return on investments	2,919	3,404	3,766	4,305	5,163
Contributions to government-owned pension plans	443	450	478	532	664
Bullion and coinage	34	43	42	60	70
Fines and penalties	23	29	30	35	41
Miscellaneous	95	196	273	215	283
<b>Total, gross general revenue</b>	<b>39,118</b>	<b>42,616</b>	<b>49,703</b>	<b>58,361</b>	<b>72,532</b>

<sup>1</sup>Canada Pension Plan.<sup>2</sup>Includes, petroleum and gas revenue tax, \$27 million (1981), \$811 million (1982), and special petroleum compensation charge, \$473 million (1982).<sup>3</sup>Includes postal receipts.

**22.3 Gross general expenditure of the federal government, years ended Mar. 31 (million dollars)**

Function	1979	1980	1981	1982
General services	2,800	2,922	3,482	4,014
Protection of persons and property <sup>1</sup>	5,265	5,642	6,372	7,495
Transportation and communications <sup>2</sup>	3,260	3,280	4,255	4,160
Health	3,849	4,202	4,391	4,741
Hospital care	2,266	2,479	2,493	2,668
Other	1,583	1,723	1,898	2,073
Social services	7,070	18,289	21,514	24,252
Canada Pension Plan	1,328	1,635	2,029	2,485
Old age security	5,491	6,320	7,418	8,585
Unemployment insurance	4,706	4,115	4,744	5,560
Worker compensation	22	26	28	33
Family allowances	2,093	1,726	1,851	2,019
Veterans benefits	876	922	993	1,124
Social welfare assistance	1,959	1,947	2,246	2,650
Other social welfare	595	625	909	823
Tax credits and rebates	—	973	1,296	973
Education	2,232	2,385	2,513	2,673
Resource conservation and industrial development <sup>3</sup>	3,418	5,260	7,246	8,509
Environment	414	360	343	350
Recreation and culture	467	457	538	621
Labour, employment and immigration	578	704	777	882
Housing	675	818	1,002	1,086
Foreign affairs and international assistance	953	1,040	1,076	1,261
Regional planning and development	119	102	162	134
Research establishments	694	904	1,073	1,080
General purpose transfers to other levels of government	3,362	4,082	4,387	5,309
Transfers to own enterprises	765	967	1,427	1,484
Debt charges	4,691	5,761	7,320	10,722
Other	2	2	2	3
<b>Total, gross general expenditure</b>	<b>50,614</b>	<b>57,177</b>	<b>67,880</b>	<b>78,776</b>

<sup>1</sup>Includes National Defence.<sup>2</sup>Includes Post Office.<sup>3</sup>Includes agriculture, trade and industry, and tourism.**22.4 Assets and liabilities of the federal government, years ended Mar. 31 (million dollars)**

Item	1979	1980	1981	1982
<b>Assets</b>				
Cash on hand or on deposit	5,568	4,512	4,120	4,530
Receivables	540	656	673	723
Loans and advances	31,810	25,559	24,622	25,843
Investments	20,214	22,148	28,764	31,196
Other assets	2,126	3,010	2,809	2,571
<b>Total, assets</b>	<b>60,258</b>	<b>58,885</b>	<b>60,988</b>	<b>64,863</b>
<b>Liabilities</b>				
Payables	13,846	18,205	6,688	8,788
Loans and advances	—	—	—	—
Treasury bills	9,600	11,864	17,824	14,561
Canada Savings Bonds	19,247	18,081	15,812	24,977
Other bonds	20,620	25,744	32,345	34,565
Other liabilities	16,239	13,646	25,493	25,479
<b>Total, liabilities</b>	<b>79,552</b>	<b>87,540</b>	<b>98,162</b>	<b>108,370</b>

## 22.5 Gross bonded debt of the federal government<sup>1</sup>

Item	1979	1980	1981	1982	
Bonded debt	\$'000	48,815,705	54,084,734	59,671,489	71,856,000
Average interest rate	%	8.45	9.06	9.90	18.48 <sup>2</sup>
Average term of issue	yr	11.72	12.33	12.24	
Place of payment					
Canada	\$'000	45,839,024	51,095,017	56,742,688	68,560,709
Outside Canada	"	2,976,681 <sup>3</sup>	2,989,717 <sup>4</sup>	2,928,801 <sup>5</sup>	3,295,291 <sup>6</sup>

<sup>1</sup>As at Mar. 31 each year.

<sup>2</sup>Average term of issue not calculated for 1982.

<sup>3</sup>Marketable bonds outstanding payable in foreign currencies are composed of: \$1,921.8 million payable in US dollars, \$683.4 million payable in Deutsche marks, \$205.4 million payable in Swiss francs and \$166.0 million payable in Japanese yen.

<sup>4</sup>Marketable bonds outstanding payable in foreign currencies are composed of: \$1,980.9 million payable in US dollars, \$671.9 million payable in Deutsche marks, \$193.4 million payable in Swiss francs and \$143.6 million payable in Japanese yen.

<sup>5</sup>Marketable bonds outstanding payable in foreign currencies are composed of: \$1,959.5 million payable in US dollars, \$617.4 million payable in Deutsche marks, \$184.1 million payable in Swiss francs and \$167.9 million payable in Japanese yen.

<sup>6</sup>Marketable bonds outstanding payable in foreign currencies are composed of: \$2,396.3 million payable in US dollars, \$559.7 million payable in Deutsche marks, \$190.6 million payable in Swiss francs and \$148.7 million payable in Japanese yen.

## 22.6 Contingent liabilities of the Government of Canada, years ended Mar. 31 (million dollars)

Item and year	Authorized limit (where applicable)	Contingent liability	Percentage of net claims to outstanding guarantees (where applicable) <sup>1</sup>
Total explicit guarantees	1979 44,919	28,489	
	1980 —	2,495	
	1981 —	2,443	
Pending and threatened litigation	1979 —	81,825	
	1980 —	1,482	
	1981 —	1,728	
Total contingent liabilities	1979 44,919	28,570	
	1980 —	3,978	
	1981 —	4,171	
1982			
Explicit guarantees by the government of:			
Borrowings by Crown corporations which are not agents of Her Majesty			
Canadian National Railways Co. - Bonds and notes	174.00	174.00	
Air Canada - Bonds and notes	28.45	4.50	
Total	202.46	178.50	
Borrowings by other than Crown corporations which are not agents of Her Majesty:			
From agents			
Loans to Indians by the Canada Mortgage and Housing Corp. and the Farm Credit Corp., guaranteed by the Department of Indian Affairs and Northern Development for on-reserve housing	100.00 <sup>2</sup>	48.13 <sup>3</sup>	2.0
From other than agents under the:			
Canada Student Loans Act	1,891.85	836.53	3.4
Small Businesses Loans Act	4	185.71	3.0
Farm Improvement Loans Act	4	147.40	4
Advance Payments for Crops Act	4	61.18	3
Fisheries Improvement Loans Act	4	17.79	1.5
Regional Development Incentives Act and Regional Economic Expansion Act	9.30 <sup>6</sup>	8.62	7.8
Enterprise development program	400.00	101.11	2.6
Loans to Indians by approved lenders guaranteed by the Department of Indian Affairs and Northern Development for on-reserve housing	2	10.67 <sup>3</sup>	
Loans to Nanisivik Mines Ltd. for development of a town at Strathcona Sound, Baffin Island	4.57	4.14	
Indian economic development program	30.00	4.02 <sup>3</sup>	20.6
Loan to the Ottawa Civil Service Recreational Association	2.00	1.01	
Total	2,437.72	1,426.36	

## 22.6 Contingent liabilities of the Government of Canada, years ended Mar. 31 (million dollars) (concluded)

Item and year	Authorized limit (where applicable)	Contingent liability	Percentage of net claims to outstanding guarantees (where applicable) <sup>1</sup>
Other explicit guarantees: <sup>7</sup>			
Insurance against accidents at nuclear installations under the Nuclear Liability Act	750.00	699.37 <sup>8</sup>	
Guarantee with respect to loans to Canadair Ltd. regarding development and production of the Challenger aircraft	1,350.00	1,003.30	
Guarantees with respect to financial obligations incurred by air carriers regarding de Havilland Aircraft of Canada Ltd. DHC-7 aircraft	230.00	86.45	
Guarantee with respect to loans to de Havilland Aircraft of Canada Ltd. to finance the development and production of the DHC-8 aircraft and other general obligations of the company	450.00	85.89	
Guarantees with respect to loans made by exporters	—	44.85	
Guarantees against destruction or losses that may be occasioned by the rental or use of agricultural property for research purposes	.03	.03	
<b>Total</b>	<b>2,780.03</b>	<b>1,919.91</b>	
<b>Total explicit guarantees</b>	<b>5,420.22</b>	<b>3,524.78<sup>9</sup></b>	
<b>Pending and threatened litigation</b>		<b>2,136.55<sup>10</sup></b>	
<b>Total contingent liabilities</b>		<b>5,661.34</b>	

<sup>1</sup> Represents the average percentage over the most recent 5 years of net claims to the amount of outstanding guarantees as at Mar. 31, 1982.

<sup>2</sup> Authorized limit for loan guarantees for on-reserve housing totals \$100 million (shown above) for loans made by Canada Mortgage and Housing Corp., the Farm Credit Corp. and other approved lenders.

<sup>3</sup> Committed guarantees exist for loans to be made to Indians for on-reserve housing and for the Indian economic development program. The amounts to be guaranteed are \$14.2 million and \$61,160 respectively. As at the reporting date, no loan instruments have been issued.

<sup>4</sup> These acts place limits on the maximum amount of guarantee for loans made by eligible lenders over different time periods. The maximum amount of guarantee per lender is expressed in legislation as a percentage of aggregate loans made to qualified borrowers and vary depending upon the dollar value range of aggregate loans made by each lender.

<sup>5</sup> Less than .1%.

<sup>6</sup> Represents total loan guarantees made for loans having a balance outstanding as at Mar. 31, 1982.

<sup>7</sup> An agreement with Chrysler Canada Ltd. in the amount of \$200 million has been entered into with respect to future loan guarantees. As at the reporting date, no loans have been made under the above agreement and consequently liabilities exist. A letter of comfort was issued by the Department of Transport to guarantee loans made to Ridley Terminals Inc. These loans are for the purpose of construction of a coal terminal and parliamentary approval is being sought to guarantee a loan of up to approximately \$185 million representing 80% of the initial capital cost of the project. As at Aug. 31, 1982 the total amount loaned to Ridley was \$16.2 million.

<sup>8</sup> There have been no claims under the Nuclear Liability Act since its inception in 1970. The act covers 15 Canadian nuclear installations as at Mar. 31, 1982.

<sup>9</sup> In July 1982, the Department of Industry, Trade and Commerce disbursed \$126.3 million to acquire 62.5% of the outstanding Series "D" preferred shares of Massey-Ferguson Ltd. This purchase results from an agreement dated June 15, 1981, between the Government of Canada and Massey-Ferguson Ltd. whereby the government guaranteed to redeem, upon request, 5 million preferred shares in the event of a failure by the company to pay a dividend. On June 30, 1982 the company defaulted on its dividend payment. Also in July 1982, the department disbursed an amount of \$9 million to acquire two LRC train sets from Bombardier Inc. This was the result of Amtrak not exercising its option to purchase the trains at the end of a lease-purchase agreement with Bombardier Inc. which Industry, Trade and Commerce had guaranteed.

<sup>10</sup> The Post Office Department was converted to the Canada Post Corp. by an act of Parliament on Oct. 16, 1981. There are certain valuations to be determined for major assets turned over to the corporation. In addition, the transfer of titles to the land and buildings turned over to the corporation by the government has not been completed. Therefore, the corporation's contingent liabilities are reported in this table.

## 22.7 Government of Canada public debt and interest payments thereon, years ended Mar. 31

Year	Gross debt \$'000,000	Net active assets \$'000,000	Net debt \$'000,000	Net debt per capita <sup>1</sup> \$	Increase or decrease in net debt during year \$'000,000	Interest paid on debt \$'000,000	Interest paid per capita <sup>2</sup> \$
1975	62,700 <sup>r</sup>	43,425 <sup>r</sup>	19,276	849.3	+ 1,147	3,164	139.4
1976	59,802	36,506	23,296	1,013.2	+ 4,021	3,908	170.0
1977	67,075	37,489	29,586	1,270.3	+ 6,290	4,714	202.4
1978	80,048 <sup>r</sup>	40,217 <sup>r</sup>	39,622	1,687.4	+ 10,036	5,541	236.0
1979	98,923	42,216	55,807	2,357.6	+ 16,185	7,026	296.8
1980	103,626	35,031	68,595	2,865.8	+ 12,788	8,492	354.8
1981	118,461	37,198	81,263	3,338.2	+ 12,668	10,657	437.8
1982	134,107	39,238	94,869	3,856.0	+ 13,606	15,129	614.9

<sup>1</sup>Based on the official estimates of population for June 1 of the year indicated.

<sup>2</sup>Based on the official estimates of population for June 1 of the year immediately preceding the one indicated.

## 22.8 Revenue collected (net of refunds) by Revenue Canada, Taxation (million dollars)

Year ended Mar. 31	Income tax <sup>1</sup>		Total collections
	Individual <sup>2</sup>	Corporation	
1976	19,532	6,611	23,064
1977	22,711	5,959	24,986
1978	23,102	6,626	25,855
1979	24,955	7,218	27,827
1980	27,935	8,512	32,104
1981	33,888	9,538	38,318

<sup>1</sup>Includes transfers to Old Age Security Fund.

<sup>2</sup>Includes non-resident withholding tax and Canada Pension Plan contributions by employers, employees and self-employed persons and unemployment insurance premiums.

## 22.9 Personal income tax payable on various levels of income, 1981 (dollars)

Status	Income	Net federal income tax	Provincial income tax
Single taxpayer - no dependents	5,000	0	57
	8,000	402	265
	10,000	740	414
	15,000	1,645	812
	20,000	2,653	1,283
	30,000	4,994	2,415
	40,000	8,105	3,786
	50,000	11,305	5,194
Married taxpayer - no children	100,000	29,780	13,323
	5,000	0	0
	8,000	—	58
	10,000	245	196
	15,000	1,100	572
	20,000	2,088	1,010
	30,000	4,286	2,072
	40,000	7,216	3,395
Married taxpayer - two children under age 18	50,000	10,416	4,803
	100,000	28,696	12,846
	5,000	- 522	0
	8,000	- 522	22
	10,000	- 380	150
	15,000	463	521
	20,000	1,447	954
	30,000	3,914	1,998
	40,000	7,024	3,310
	50,000	10,224	4,718
	100,000	28,462	12,743

Notes: The taxpayer is assumed to be under age 65, and to receive wage and salary income only. Family allowances, at 1981 rates, are added to income in computing tax. In addition, the personal exemptions and the \$100 standard deduction, the general employment expense allowance, and CPP (1981 rates) and UI (1981 rates) contributions are deducted in calculating tax. The employment expense deduction is 3% maximum \$500. The child tax credit is included in federal income tax. The calculation of provincial tax takes into account the 1981 provincial tax rates and 1980 tax reduction. Provincial taxes are calculated at a rate of 44% of federal basic tax.

**22.10 Number of taxpayers, assessed income and income tax payable<sup>1</sup>, 1981**

Province	Taxpayers No.	Total income assessed \$'000,000	Federal tax payable \$'000,000	Provincial tax payable \$'000,000	Average federal tax paid \$'000,000
Newfoundland	201,647	3,189	305	203	1,500
Prince Edward Island	48,760	712	59	38	1,200
Nova Scotia	354,978	6,001	583	350	1,600
New Brunswick	279,191	4,518	423	255	1,500
Quebec	2,518,411	49,919	5,627	5,703 <sup>2</sup>	2,200
Ontario	3,863,987	82,582	9,592	4,898	2,400
Manitoba	405,557	7,942	818	506	2,000
Saskatchewan	378,151	8,144	866	525	2,200
Alberta	1,064,471	24,779	3,103	1,284	2,900
British Columbia	1,269,098	28,675	3,416	1,677	2,600
Yukon	12,550	278	35	17	2,700
Northwest Territories	18,336	389	48	23	2,600
Canada	10,430,624	217,440	24,928	9,775	2,300

<sup>1</sup>Taxable returns.<sup>2</sup>*Statistiques fiscales des particuliers du Québec*, Ministry of Revenue, Quebec, 1981.**22.11 Taxpayers in selected cities, income and tax<sup>1</sup>, 1981**

City and province	Taxpayers No.	Total income assessed \$'000	Federal tax payable \$'000
Brantford, Ont.	34,715	662,167	109,429
Calgary, Alta.	326,363	7,903,270	1,478,935
Dartmouth, NS	39,988	717,195	121,212
Edmonton, Alta.	335,235	7,559,816	1,367,448
Guelph, Ont.	35,238	705,958	121,120
Halifax, NS	73,495	1,356,571	233,011
Hamilton, Ont.	137,409	2,688,829	455,870
Hull, Que.	55,300	1,049,891	119,310
Kingston, Ont.	37,764	768,419	132,877
Kitchener-Waterloo, Ont.	90,731	1,413,210	301,692
London, Ont.	119,266	2,415,202	47,813
Moncton, NB	33,097	554,894	87,589
Montréal, Que.	451,329	8,603,940	988,647
New Westminster, BC	21,017	427,832	75,047
Niagara Falls, Ont.	29,539	584,570	99,543
Oakville, Ont.	35,904	920,520	187,307
Oshawa, Ont.	53,527	1,112,456	198,637
Ottawa, Ont.	188,081	4,367,810	810,824
Peterborough, Ont.	41,462	791,232	127,423
Québec, Que.	185,901	3,791,296	450,270
Regina, Sask.	79,720	1,705,033	311,863
Saint John, NB	39,550	683,248	111,035
St. Catharines, Ont.	52,683	1,126,062	199,484
St. John's, Nfld.	55,671	976,179	176,051
Sarnia, Ont.	31,090	723,691	139,876
Saskatoon, Sask.	72,890	1,526,773	273,094
Sault Ste Marie, Ont.	36,870	806,382	147,706
Sherbrooke, Que.	45,058	833,713	91,015
Sudbury-Copper Cliff, Ont.	39,133	817,472	144,360
Sydney-Glace Bay, NS	35,649	548,881	82,648
Thunder Bay, Ont.	54,228	1,161,465	211,026
Toronto, Ont.	525,099	11,332,676	2,086,486
Trois-Rivières, Que.	24,110	480,216	55,675
Vancouver, BC	224,820	5,127,502	941,977
Victoria, BC	107,200	2,320,256	395,593
Windsor, Ont.	83,605	1,759,613	311,107
Winnipeg, Man.	269,494	5,290,707	926,044

<sup>1</sup>Taxable returns.

**22.12 Taxpayers by occupation, income assessed and tax, 1981**

Occupational group	Taxpayers No.	Total income assessed \$'000	Federal tax payable \$'000
Employees	399,712	180,964,886	20,205,072
Farmers	277,470	4,483,641	335,323
Fishermen	34,391	436,442	35,942
Self-employed professionals			
Accountants	10,733	412,214	63,568
Medical doctors and surgeons	30,542	2,037,829	426,636
Dentists	7,892	474,620	97,086
Lawyers and notaries	16,124	856,548	161,760
Consulting engineers and architects	4,041	161,643	28,096
Entertainers and artists	19,287	188,917	14,018
Other professionals	39,981	806,837	102,681
Salesmen	33,001	510,981	54,620
Total business proprietors	493,234	6,313,324	588,084
Investors	1,179,343	21,897,755	2,002,049
Property owners	105,940	1,729,541	197,348
Pensioners	951,866	8,978,235	416,250
All others	1,499,135	3,740,265	199,774
<b>Total</b>	<b>15,179,141</b>	<b>233,933,679</b>	<b>24,928,308</b>

**22.13 Corporation income taxes by industrial division (million dollars)**

Year and industrial division	Book profit before taxes	Taxable income	Federal income taxes	Provincial income taxes	Total income taxes
1978 total	31,324.4	19,659.0	5,369.6	2,202.9	7,572.5
1979 total	43,584.4	25,154.8	6,567.8	2,834.8	9,402.7
1980 total	48,992.8	29,424.6	8,086.8	3,326.8	11,413.6
1981 <sup>P</sup>					
Agriculture, forestry, fishing	...	500.2	74.3	49.7	124.1
Mining	...	4,069.6	1,311.9	327.1	1,638.9
Manufacturing	...	9,896.4	2,611.5	1,245.6	3,857.2
Construction	...	1,411.0	325.6	140.7	466.2
Transportation, communication and other utilities	...	2,213.8	688.1	279.6	967.7
Wholesale trade	...	2,847.9	833.1	339.7	1,172.9
Retail trade	...	2,047.7	511.7	222.9	734.6
Finance	...	4,448.8	1,233.2	508.9	1,742.1
Services	...	2,544.9	639.1	273.9	913.0
<b>Total</b>	<b>...</b>	<b>29,980.4</b>	<b>8,228.5</b>	<b>3,388.1</b>	<b>11,616.6</b>

**22.14 Taxable income of corporations by province (million dollars)**

Province or territory	1977	1978	1979	1980	1981 <sup>P</sup>
Newfoundland	155.6	193.9	249.7	280.4	337.3
Prince Edward Island	28.8	36.1	44.8	52.5	64.8
Nova Scotia	306.7	362.6	449.1	565.5	510.0
New Brunswick	217.9	234.0	431.5	519.2	448.8
Quebec	3,105.2	3,763.3	4,747.7	5,502.0	5,434.6
Ontario	6,099.0	7,148.7	8,902.6	10,291.5	10,653.3
Manitoba	562.6	641.3	798.9	905.0	906.9
Saskatchewan	576.9	632.1	789.6	972.8	964.5
Alberta	3,881.6	3,942.7	5,028.0	6,167.6	6,842.9
British Columbia	1,943.3	2,376.5	3,256.0	3,522.1	3,229.7
Yukon	20.2	23.7	51.2	46.7	29.9
Northwest Territories	35.7	59.4	86.9	100.0	64.5
Other <sup>1</sup>	221.9	244.7	318.7	499.4	493.3
<b>Canada</b>	<b>17,155.4</b>	<b>19,659.0</b>	<b>25,154.8</b>	<b>29,424.6</b>	<b>29,980.4</b>

<sup>1</sup>Includes taxable income of corporations; foreign operations and non-resident owned investment corporations.

**22.15 Excise taxes collected, by commodity, years ended Mar. 31 (million dollars)**

Commodity	1979	1980	1981	1982
Sales tax <sup>1</sup>	4,729	4,698	5,429	6,185
Other excise taxes:				
Cigarettes, tobacco and cigars	397	394	429	404
Jewellery, watches and ornaments	45	54	51	49
Matches and lighters	3	3	3	4
Oil export charge	328	750	842	963
Special excise tax (gasoline)	516	420	454	436
Wine	12	12	54	61
Sundry commodities	39	34	27	33
Interest and penalties	4	5	9	14
Less refunds	-1	—	-1	-1
<b>Total</b>	<b>6,072</b>	<b>6,370</b>	<b>7,297</b>	<b>8,184</b>

<sup>1</sup>Includes tax credited to the Old Age Security Fund.

**22.16 Special excise tax rates as at Dec. 1981 and Dec. 1982**

Item	Tax	
	Dec. 1981	Dec. 1982
Cigarettes (per 5 cigarettes)	3.348¢	3.864¢
Cigars	20.5%	20.5%
Pipe tobacco, cut tobacco, snuff	\$2.2097	\$2.5502
Jewellery, including articles of ivory, amber, shell, precious or semi-precious stones, clocks and watches <sup>1</sup> , goldsmiths' and silversmiths' products, except gold-plated or silver-plated ware for the preparation or serving of food or drink	10%	10%
Lighters	10¢	10¢
Playing cards (per pack)	20¢	20¢
Slot machines – coin, disc or token-operated games or amusement devices	10%	10%
Matches	10%	10%
Tobacco, pipes, cigar and cigarette holders and cigarette rolling devices	10%	10%
Wines <sup>2</sup> (additional excise taxes) <sup>3</sup>		
Wines of all kinds containing less than 1.2% absolute alcohol by volume	1.23¢/L	1.42¢/L
Wines of all kinds containing less than 7% absolute alcohol by volume	14.78¢/L	17.03¢/L
Wines of all kinds containing more than 7% absolute alcohol by volume	30.80¢/L	35.48¢/L
Insurance premiums paid to British or foreign companies not authorized to transact business in Canada or to non-resident agents of authorized British or foreign companies	10%	10%
Air transportation tax on tickets purchased in or outside of Canada for transportation of persons		
(a) in the taxation area <sup>4</sup> (including travel in Canada) (8% max.)	\$17.50	\$23.50
(b) beginning in Canada and ending outside the taxation area <sup>5</sup>	\$12.50	\$12.50
Automobiles, station wagons and vans designed for use as passenger vehicles – tax applies to vehicles which exceed the specified mass for the vehicle type <sup>6</sup>		
Automobile mass limit 2 007 kg		
Station wagon and van mass limit 2 268 kg		
Tax rates:		
– for the portion of the mass that exceeds the mass limit but not more than 45 kg <sup>7</sup>	\$30.00	\$30.00
– for the portion of the mass that exceeds the mass limit by 45 kg but not more than 90 kg	\$40.00	\$40.00
– for the portion of the mass that exceeds the mass limit by 90 kg but not more than 135 kg	\$50.00	\$50.00
– for each additional 45 kg in excess of the mass limit plus 135 kg	\$60.00	\$60.00
Gasoline for personal use <sup>8</sup>	1.5¢/L	1.5¢/L
Air conditioners designed for use in automobiles, station wagons, vans or trucks	\$100	\$100

Almost all of the foregoing items, except insurance premiums and air transportation, are also subject to the general sales tax. Alcohol and tobacco products are subject to additional taxes under the Excise Act (referred to as excise duties).

<sup>1</sup>Special excise tax only applies on the amount by which the sale price or the duty-paid value of the clock or watch exceeds \$50.

<sup>2</sup>These taxes apply only to wines manufactured in Canada. The customs tariff on wines includes a levy on imported wines to correspond to the taxes on domestic production.

<sup>3</sup>These taxes apply to both domestic and imported wines.

<sup>4</sup>Includes Canada, the islands of St. Pierre and Miquelon, and the US except Hawaii.

<sup>5</sup>Reduced to \$4 for a child under 12 travelling at a fare of 50% or more below the applicable fare; nil if the fare is 90% below the applicable fare.

<sup>6</sup>Excludes ambulances, hearses, vehicles for police or firefighting.

<sup>7</sup>The weight limit is 4,425 lb. for automobiles and 5,000 lb. for station wagons and vans.

<sup>8</sup>Reduced from 10¢ to 7¢ a gallon effective Aug. 25, 1978; the rate was converted to metric equivalent effective Jan. 1, 1979.

**22.17 Liabilities of provincial and territorial governments, years ended Mar. 31 (thousand dollars)**

Province or territory and year		Short-term bank loan and over-drafts	Payables	Loans and advances	Treasury bills	Savings bonds	Bonds and debentures	Other securities	Deposits and other liabilities	Total
Canada	1979	326,045	3,654,743	2,563,113	532,613	760,132	36,986,313	568,485	1,512,730	46,904,174
	1980	513,953	4,391,867	2,884,340	403,091	635,980	40,262,860	853,464	1,798,273	51,743,828
	1981	697,135	5,169,447	2,675,486	663,092	1,298,367	45,223,856	1,320,512	1,983,753	59,031,648
1982										
Newfoundland		17,569	96,837	128,525	62,655	—	2,427,675	819	42,389	2,776,469
Prince Edward Island		—	35,491	23,756	—	—	323,222	—	23,279	405,748
Nova Scotia		60,872	249,079	146,713	—	—	2,543,170	65,119	5,448	3,070,401
New Brunswick		6,667	222,153	52,020	—	—	1,769,953	—	93,362	2,144,155
Quebec		197,403	4,255,831	1,513,488	1,010,000	975,915	10,556,195	1,372,329	258,738	20,139,899
Ontario		—	116,254	487,687	—	—	22,750,811	325,000	753,063	24,432,815
Manitoba		22,409	157,439	285,028	52,000	10,777	3,061,154	27,911	280,920	3,897,638
Saskatchewan		—	67,985	176,115	140,446	—	3,224,317	113,000	71,252	3,793,115
Alberta		134,543	955,408	29,307	—	—	4,541,622	—	589,802	6,250,682
British Columbia		150,391	698,260	11,148	—	—	2,544,151	57,200	155,402	3,616,552
Yukon		—	20,704	26,411	—	—	—	—	3,402	50,517
Northwest Territories		15	30,659	33,486	—	—	—	—	1,647	65,807
Canada		589,869	6,906,100	2,913,684	1,265,101	986,692	53,742,270	1,961,378	2,278,704	70,643,798

**22.18 Liabilities guaranteed by provincial and territorial governments<sup>1</sup>, years ended Mar. 31 (thousand dollars)**

Province or territory and year		Bonds and debentures	Bank loans	Other	Total
Canada	1979	29,880,876	1,427,476	2,605,553	33,913,905
	1980	33,636,663	1,404,137	3,423,116	38,463,916
	1981	37,550,700	1,472,100	3,997,100	43,019,900
1982					
Newfoundland		601,213	178,087	98,409	877,709
Prince Edward Island		4,577	2,564	657	7,798
Nova Scotia		944,267	285,467	1,241	1,230,975
New Brunswick		1,763,144	19,337	458,511	2,240,992
Quebec		16,064,229	886,128	656,525	17,606,882
Ontario		8,429,710	130,747	405,950	8,966,407
Manitoba		1,753,162	—	75,251	1,828,413
Saskatchewan		65,000	33,944	5,491	104,435
Alberta		4,888,685	108,295	2,583,363	7,580,343
British Columbia		8,634,319	—	212,932	8,847,251
Yukon		—	—	6,600	6,600
Northwest Territories		—	222	78,374	78,596
Canada		43,148,306	1,644,791	4,583,304	49,376,401

<sup>1</sup>Excludes liabilities of provincial government special funds guaranteed by provincial governments but considered as provincial government liabilities.

### 22.19 Bonds and debentures<sup>1</sup>, by market, of provincial governments, years ended Mar. 31 (thousand dollars)

Province and year		Domestic	Foreign			Total	
			Traditional		International		
			United States	Europe			Other
Total	1979	28,504,219	6,895,953	915,029	370,666	1,060,578	37,746,445
	1980	31,443,455	6,989,353	843,768	464,468	1,157,796	40,898,840
	1981	37,212,301	6,862,666	791,199	454,318	1,201,738	46,522,222
1982							
Newfoundland		1,266,056	638,458	45,581	—	477,580	2,427,675
Prince Edward Island		319,288	3,934	—	—	—	323,222
Nova Scotia		1,633,557	633,479	79,977	—	196,157	2,543,170
New Brunswick		1,108,253	512,865	—	48,204	100,631	1,769,953
Quebec		8,857,854	840,014	539,956	366,753	927,533	11,532,110
Ontario		18,177,458	4,547,125	26,228	—	—	22,750,811
Manitoba		1,675,879	667,955	450,094	139,415	138,588	3,071,931
Saskatchewan		2,134,154	640,163	—	—	450,000	3,224,317
Alberta		4,469,703	71,919	—	—	—	4,541,622
British Columbia		2,448,925	95,226	—	—	—	2,544,151
Total		42,091,127	8,651,138	1,141,836	554,372	2,290,489	54,728,962

<sup>1</sup>Includes savings bonds.

### 22.20 Summary of transfers by the federal government to provincial governments, territories and local governments<sup>1</sup> (million dollars)

Payee and year <sup>2</sup>	General purpose transfers	Specific purpose transfers	Total
ALL PROVINCES AND TERRITORIES			
1979	3,227	7,540	10,767
1980	3,952	8,032	11,984
1981	4,229	8,568	12,797
SPECIFIC PROVINCES AND TERRITORIES			
1982			
Newfoundland	493	282	775
Prince Edward Island	117	74	191
Nova Scotia	589	384	973
New Brunswick	452	364	816
Quebec	2,448	2,185	4,633
Ontario	66	3,076	3,142
Manitoba	412	423	835
Saskatchewan	106	462	568
Alberta	59	838	897
British Columbia	9	1,122	1,131
Yukon	63	15	78
Northwest Territories	275	36	311
Total	5,089	9,261	14,350
	General purpose transfers (Grants in lieu of taxes)	Specific purpose transfers	Total
LOCAL GOVERNMENTS			
1979	135	262	397
1980	130	201	331
1981	158	152	310
LOCAL GOVERNMENTS IN SPECIFIC PROVINCES AND TERRITORIES			

## 22.20 Summary of transfers by the federal government to provincial governments, territories and local governments<sup>1</sup> (million dollars) (concluded)

Payee and year <sup>2</sup>	General purpose transfers	Specific purpose transfers	Total
1982			
Newfoundland	3	6	9
Prince Edward Island	1	—	1
Nova Scotia	16	5	21
New Brunswick	2	9	11
Quebec	50	39	89
Ontario	104	41	145
Manitoba	10	8	18
Saskatchewan	5	2	7
Alberta	11	3	14
British Columbia	16	11	27
Yukon	1	—	1
Northwest Territories	1	—	1
<b>Total</b>	<b>220</b>	<b>124</b>	<b>344</b>
Total of transfers to provincial governments, territories and local governments		1979	11,164
		1980	12,315
		1981	13,107
		1982	14,694

<sup>1</sup>Further details available in *Federal government finance* (Statistics Canada 68-211).

<sup>2</sup>For years ended Mar. 31.

## 22.21 Gross general revenue of provincial and territorial governments<sup>1</sup> (million dollars)

Province or territory and source	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	1,057.0	1,243.7	1,362.3	1,482.8	1,699.0
Prince Edward Island	239.2	263.6	289.1	326.1	398.9
Nova Scotia	1,343.7	1,494.8	1,684.5	1,898.6	2,132.2
New Brunswick	1,129.2	1,314.9	1,515.1	1,604.6	1,826.4
Quebec	12,831.6	14,208.1	15,865.2	17,779.8	20,800.4
Ontario	12,521.8	14,003.5	15,921.0	17,335.6	19,525.5
Manitoba	1,653.6	1,782.6	2,084.4	2,283.9	2,423.0
Saskatchewan	1,824.5	2,084.3	2,363.6	2,833.1	3,322.1
Alberta	6,076.6	7,642.5	8,569.6	9,997.4	10,184.6
British Columbia	4,698.6	5,165.4	6,232.4	6,817.5	7,725.5
Yukon	86.4	102.3	110.5	123.5	143.2
Northwest Territories	233.3	267.8	301.2	433.8	411.8
<b>Total</b>	<b>43,695.6</b>	<b>49,573.4</b>	<b>56,298.9</b>	<b>62,916.6</b>	<b>70,592.6</b>
Gross general revenue by source:					
Income tax					
Individuals	9,477.1	10,974.2	11,637.3	13,420.0	16,152.1
Corporations	2,107.7	2,545.4	3,034.5	3,602.6	3,753.5
General sales tax	4,955.1	4,509.6	5,766.1	6,211.5	7,216.7
Motive fuel tax	1,667.6	1,644.6	1,782.2	1,862.6	2,336.5
Health insurance premiums	1,479.8	1,704.8	1,789.0	1,937.3	2,749.2
Social insurance levies	1,303.5	1,472.5	1,633.9	1,723.4	1,976.2
Natural resource revenue	4,351.1	5,497.5	6,737.1	7,342.2	748.3
Privileges, licences and permits	1,000.2	1,400.3	1,496.5	1,562.5	1,724.0
Liquor profits	1,053.6	1,181.6	1,200.0	1,406.0	1,517.2
Other revenue from own sources	6,655.7	8,132.1	9,176.4	10,850.0	11,708.0
General purpose transfers from other levels of government	3,193.2	3,132.0	3,750.1	3,998.0	4,727.6
Specific purpose transfers from other levels of government	6,451.0	7,428.8	8,295.8	9,000.7	8,583.3
<b>Total</b>	<b>43,695.6</b>	<b>49,573.4</b>	<b>56,298.9</b>	<b>62,916.6</b>	<b>70,592.6</b>

<sup>1</sup>Fiscal years ended Mar. 31.

**22.22 Gross general expenditure of provincial and territorial governments<sup>1</sup> (million dollars)**

Province or territory and function	1978	1979	1980	1981	1982 <sup>P</sup>
Newfoundland	1,106.4	1,466.0	1,501.4	1,636.9	1,721.1
Prince Edward Island	261.6	273.8	301.1	343.3	376.5
Nova Scotia	1,452.1	1,655.6	1,751.2	2,041.9	2,347.9
New Brunswick	1,225.5	1,350.9	1,474.8	1,687.0	1,909.4
Quebec	12,890.9	14,653.2	16,678.3	19,361.9	21,547.9
Ontario	13,986.4	15,215.2	16,606.2	18,168.6	20,142.1
Manitoba	1,913.0	1,846.3	2,106.2	2,395.9	2,674.5
Saskatchewan	1,820.2	1,954.1	2,283.0	2,636.5	2,842.9
Alberta	4,184.4	4,806.4	6,789.6	6,898.7	8,037.4
British Columbia	4,465.4	4,961.3	5,639.6	6,838.2	7,165.5
Yukon	81.2	101.4	126.5	125.2	135.7
Northwest Territories	233.9	267.4	289.8	313.8	385.8
<b>Total</b>	<b>43,621.0</b>	<b>48,551.5</b>	<b>55,547.7</b>	<b>62,447.9</b>	<b>69,286.8</b>
Gross general expenditure by function:					
General government	2,862.0	3,109.6	3,678.1	3,838.3	4,667.3
Protection of persons and property	1,504.0	1,593.2	1,794.7	2,053.8	2,310.5
Transportation and communications	3,337.6	3,639.3	3,986.9	4,482.8	4,715.1
Health	10,580.4	11,609.2	12,891.0	15,160.4	16,937.6
Social welfare	6,383.4	7,081.3	7,999.4	9,647.2	10,273.0
Education	10,274.2	10,857.2	11,813.3	13,460.5	15,250.6
Resources, conservation and industrial development	2,239.4	2,758.9	3,104.2	3,801.6	3,719.5
Regional planning and development	498.1	714.7	629.8	618.4	759.8
Debt charges	2,830.5	3,477.2	4,071.7	4,838.6	5,491.5
General purpose transfers to local governments	1,114.3	1,381.6	2,516.7	1,231.1	1,519.4
All other expenditures	1,961.1	2,329.3	2,761.9	3,315.9	3,642.4
<b>Total</b>	<b>43,585.0</b>	<b>48,551.5</b>	<b>55,247.7</b>	<b>62,447.9</b>	<b>69,286.8</b>

<sup>1</sup>Fiscal years ended Mar. 31.**22.23 General revenue of local governments<sup>1</sup> (million dollars), by source**

Local governments in provinces and territories	1978 <sup>F</sup>	1979 <sup>F</sup>	1980 <sup>F</sup>	1981 <sup>P</sup>	1982 <sup>F</sup>
Newfoundland	103.8	127.3	155.5	158.5	170.1
Prince Edward Island	71.4	68.4	72.1	78.9	91.7
Nova Scotia	621.3	710.2	802.4	938.4	978.3
New Brunswick	155.6	184.2	194.1	214.6	250.3
Quebec	5,902.7	6,208.4	7,455.7	8,202.0	9,188.2
Ontario	8,360.3	9,190.9	10,194.1	11,290.8	12,552.2
Manitoba	921.7	960.6	1,121.8	1,192.6	1,331.8
Saskatchewan	901.8	1,025.1	1,072.7	1,173.6	1,322.4
Alberta	2,328.5	3,765.3	3,443.1	3,931.5	4,726.4
British Columbia	2,146.3	2,324.7	2,699.7	3,060.0	3,135.7
Yukon	12.8	12.4	13.9	15.6	20.0
Northwest Territories	32.6	36.2	41.2	47.0	52.0
<b>Canada</b>	<b>21,558.8</b>	<b>24,613.7</b>	<b>27,266.3</b>	<b>30,303.5</b>	<b>33,819.1</b>
Revenue by source:					
Taxes	8,149.8	8,477.7	9,695.6	11,164.0	12,564.3
Grants in lieu of taxes	447.1	433.3	643.0	686.5	761.8
Sales of goods and services	1,686.8	2,026.7	2,426.3	2,546.8	2,905.2
Rentals	126.7	146.6	181.4	189.6	205.9
Concessions and franchises	39.0	35.8	35.8	47.0	59.9
Licences and permits	102.9	114.9	131.7	155.1	159.0
Remittances from own enterprises	117.2	126.8	146.8	139.0	169.0
Interest	267.9	463.5	598.2	699.2	630.5
Fines	150.5	165.2	214.9	232.6	255.5
Miscellaneous	176.9	519.5	630.0	431.3	465.0
General purpose transfers					
Provincial governments	1,328.3	1,805.6	1,234.9	1,177.0	1,222.2
Specific purpose transfers					
federal government	239.3	208.6	186.8	142.3	135.2
provincial governments	8,726.4	10,089.5	11,141.0	12,693.1	14,285.6
<b>Total, general revenue</b>	<b>21,558.8</b>	<b>24,613.7</b>	<b>27,266.3</b>	<b>30,303.5</b>	<b>33,819.1</b>

<sup>1</sup>Fiscal years ended Dec. 31.

## 22.24 General expenditure of local governments<sup>1</sup> (million dollars)

Local governments in provinces and territories	1978 <sup>r</sup>	1979 <sup>r</sup>	1980 <sup>r</sup>	1981 <sup>p</sup>	1982 <sup>e</sup>
Newfoundland	114.7	147.5	179.1	142.7	156.2
Prince Edward Island	80.3	72.9	71.2	75.9	89.2
Nova Scotia	648.8	751.5	835.5	931.0	986.6
New Brunswick	181.6	202.3	208.3	232.4	268.5
Quebec	6,382.2	6,416.1	7,708.3	9,119.3	9,848.3
Ontario	8,739.2	9,128.1	10,047.8	11,006.1	12,372.5
Manitoba	923.8	969.9	1,110.0	1,183.4	1,320.9
Saskatchewan	938.8	1,062.3	1,093.5	1,235.3	1,392.8
Alberta	2,681.3	3,198.8	3,905.7	4,503.2	5,490.9
British Columbia	2,382.4	2,546.1	2,855.8	3,208.3	3,453.5
Yukon	13.7	13.7	16.5	17.6	22.0
Northwest Territories	38.6	41.8	39.7	47.8	51.1
Canada	23,125.4	24,551.0	28,071.4	31,703.0	35,452.5
Expenditures by function:					
General government	1,067.2	1,164.1	1,463.9	1,642.0	1,906.7
Protection of persons and property	1,737.2	1,828.2	2,127.9	2,454.6	2,769.8
Transportation and communications	2,684.3	2,817.4	3,304.4	3,897.6	4,207.0
Environment	1,993.9	2,032.1	2,399.1	2,571.2	3,123.3
Health	1,129.6	1,195.7	1,421.3	1,416.7	1,622.1
Social welfare	681.0	758.0	847.8	928.0	1,056.6
Regional planning and development	263.2	311.5	322.3	292.3	327.6
Housing - general assistance	42.9	42.2	53.0	48.4	49.9
Resource conservation and industrial development	191.5	263.3	324.0	362.7	349.7
Recreation and culture	1,374.5	1,463.1	1,781.0	1,947.7	2,137.4
Education - primary and secondary	9,721.7	10,537.3	11,610.9	13,507.0	14,816.8
Fiscal services	2,225.9	2,088.5	2,347.0	2,619.9	3,050.3
Other services	23,112.5	24,549.6	28,068.8	31,714.9	35,435.3
Total, general expenditure	23,125.4	24,551.0	28,071.4	31,703.0	35,452.5

<sup>1</sup>Fiscal year ended Dec. 31.

## 22.25 Direct debt of local governments<sup>1</sup> (million dollars)

Year and location	Long-term (debentured) debt			Short- term borrowings	Accounts payable and other loans	Other liabilities	Total direct debt less sinking funds
	Amount	Less sinking fund	Net				
1978	17,803.6	954.5	16,849.1	1,146.0	3,329.8	631.9	21,956.9
1979	17,782.2	1,026.1	16,756.1	1,815.8	4,017.1	814.2	23,403.2
In specific provinces and territories							
1980							
Newfoundland	153.5	0.9	152.6	52.5	63.7	6.6	275.4
Prince Edward Island	40.2	7.0	33.2	5.4	15.3	—	53.9
Nova Scotia	406.3	3.7	402.6	83.5	93.4	24.2	603.7
New Brunswick	195.9	1.1	194.8	51.9	78.4	6.9	332.0
Quebec	7,039.9	82.2	6,957.7	737.1	2,331.7	221.4	10,247.9
Ontario	4,564.9	632.5	3,932.4	11.4	1,458.8	77.2	5,479.9
Manitoba	726.8	107.0	619.8	70.0	100.2	40.3	830.3
Saskatchewan	295.3	44.7	250.6	23.2	102.6	63.7	440.1
Alberta	2,767.4	12.8	2,754.6	43.4	698.4	332.8	3,829.2
British Columbia	2,902.2	161.0	2,741.2	32.9	308.5	88.3	3,170.9
Yukon	12.6	—	12.6	—	2.3	0.5	15.4
Northwest Territories	17.4	—	17.4	0.5	7.7	6.0	31.6
Canada	19,122.4	1,052.9	18,069.5	1,111.9	5,261.0	867.9	25,310.3

<sup>1</sup>Fiscal years ended Dec. 31.

22.26 Government employment and payrolls, by province and territory, March 31, 1983

Province or territory	Federal government		Provincial governments		Local governments	
	Number of employees	Quarterly payroll <sup>1</sup> \$'000	Number of employees	Quarterly payroll <sup>1</sup> \$'000	Number of employees	Quarterly payroll <sup>1</sup> \$'000
Newfoundland	10,108	53,427	13,634	65,534	2,478	9,417
Prince Edward Island	3,026	17,476	4,246	20,260	291	1,225
Nova Scotia	35,019	200,672	21,207	90,215	7,072	28,294
New Brunswick	14,632	81,815	26,816	143,827	3,942	19,317
Quebec	84,166	482,338	91,063	584,852	62,244	352,272
Ontario	173,378	1,059,476	110,958	607,601	129,238	634,549
Manitoba	20,865	116,049	14,393	83,380	9,848	39,490
Saskatchewan	12,848	73,927	16,381	105,076	10,968	50,907
Alberta	30,085	170,813	66,089	375,623	30,764	216,749
British Columbia	43,593	255,869	..	..	29,700	169,330
Yukon	1,302	7,635	1,802	11,182	192	1,156
Northwest Territories	2,558	14,612	3,606	28,107	760	3,531
Canada	431,580	2,534,109	370,195	2,115,989	287,497	1,546,237

<sup>1</sup>Three months ending Mar. 31, 1983.

Sources

- 22.1 - 22.7, 22.15, 22.17 - 22.26 Public Institutions Division, Statistics Canada.
- 22.8 - 22.12 Statistical Services Division, Revenue Canada, Taxation.
- 22.13, 22.14 Public Finance Division, Statistics Canada.
- 22.16 Personal Income and Commodity Tax Analysis Division, Department of Finance.



CHAPTER 23

---

# REVIEW OF THE ECONOMY



## UPDATE

---

For the year 1984 the rate of inflation in Canada, as measured by the consumer price index (CPI) declined to 4.4%, its lowest level since 1971, from 5.8% in 1983.

In general the economy turned from recession to recovery in 1983, with a 2.7% growth in the gross domestic product (GDP) in constant dollars, and an increase in the volume of exports of about 8.9% over 1982.

In 1984 the volume of exports rose a further 22.2%. GDP increased 4.6% in the first 11 months of 1984 compared with the same period in 1983.

Like many currencies, the Canadian dollar remained weak. Its average monthly value in 1984 was 77.25 US cents, down from 81.14 US cents in 1983.

Employment increased 2.5% in 1984, after going up only 0.8% in 1983. The unemployment rate averaged 11.3% of the labour force in 1984, down from an average of 11.9% in 1983.

## CHAPTER 23

---

# REVIEW OF THE ECONOMY

<b>23.1</b>	<b>A glance back at the 1970s</b>	<b>741</b>
<b>23.2</b>	<b>Influence of the 1970s on the early 1980s</b>	<b>742</b>
<b>23.3</b>	<b>Sectoral breakdown</b>	<b>744</b>
23.3.1	Prices	744
23.3.2	Business sector	745
23.3.3	Household sector	745
23.3.4	Government sector	746
23.3.5	International sector	746
<b>23.4</b>	<b>Regional economies</b>	<b>747</b>

## TABLES

23.1, 23.6	Income and expenditure aggregates	749
23.2, 23.17	Gross fixed capital formation	749
23.3, 23.4	Output and earnings of workers	750
23.5	Credit and exchange markets	750
23.7-23.9	Inflation rates in selling price indexes, consumer price indexes and raw materials price indexes	752
23.10, 23.11, 23.16	Changes in employment and unemployment rates	753
23.12	Growth rates in personal expenditures	754
23.13	Current account balance	754
23.14, 23.15	Changes in merchandise imports, exports	755
23.18	Retail trade by region	756

## CHART

Chart 23.1	Selected economic indicators	743
------------	------------------------------	-----

## CHAPTER 23

# REVIEW OF THE ECONOMY

In many respects, the performance of the Canadian economy in the early 1980s has been substandard. For example, real gross national product (GNP), the inflation adjusted value of all goods and services produced, grew at an average annual rate of 4.7% from 1960 to 1979 but managed only a 0.8% annual average growth between 1980 and 1983. The unemployment rate climbed to double-digit levels in 1982 and 1983, twice the rate that prevailed in the late 1960s and early 1970s. Another feature of the Canadian economy in the early 1980s was its increased volatility. It went into recession in the first two quarters of 1980, then recovered from mid-1980 to mid-1981 only to relapse into a deeper recession lasting until late 1982. In 1983 the economy began to recover again. As a comparison, during the period from 1960 to the end of 1979 there were also two recessions and two recoveries. On the brighter side, although the inflation rate reached very high levels in the early 1980s, in 1983 it fell to its lowest level since 1972. To the extent that some of the problems with Canada's economic performance in the early 1980s were created by the high inflation rates of the late 1970s and early 1980s, the improved inflation performance in 1982 and 1983 could be a good omen for the Canadian economy for the middle to late 1980s.

## 23.1 A glance back at the 1970s

**Rising inflationary expectations.** To gain some perspective on why the economy performed as it did in the early 1980s, it is helpful to consider some of its key features in the period 1973-79. After having been consistently under 5% throughout the 1960s and early part of the 1970s, the annual inflation rate as measured by the consumer price index (CPI) climbed to double-digit levels by 1974 and 1975. Although the inflation rate eased in the 1975-76 period, it fell no lower than 7%. Thus, even at its lowest point in the mid-1970s the inflation rate was still higher than during the 1960s and early 1970s. As inflation increased there was a growing expectation among the public that it would continue at high levels. One of the most noticeable areas in which inflationary expectations were increasing was energy prices. The combination of the creation of the OPEC cartel,

political tension in the Middle East, and general uneasiness about the ability of world energy supplies to keep pace with demand fostered expectations that oil prices would continue to rise at a faster pace than the general inflation rate. Since energy is an input in the production process, escalating oil prices were generally expected to keep the overall inflation rate at high levels. Shortages in many raw materials led to a hoarding psychology and a commodity price explosion resulted in 1973-74. After some easing of inflationary pressures in the wake of the 1974-75 recession, commodity prices were once again climbing sharply by the late 1970s.

**Aggregate demand.** From 1977 to 1979 wage rates in general did not keep pace with the inflation rate, as measured by the CPI. Part of the problem with real wages (that is, wages adjusted for inflation) was a steady deterioration in productivity as measured by output per worker (Table 23.3). The decline in real wage rates served to restrain growth in consumer expenditure. From 1977 on, growth of consumer spending remained well below the levels associated with previous economic expansions. In addition to declining real wages, interest rates began to move up to levels not experienced in the 1960s and early 1970s. These factors contributed to a steady decline in residential construction in the years after 1976.

A boom in spending on non-residential construction and machinery and equipment helped sustain the economy in the late 1970s. Many raw material producers sought to capitalize on the boom in commodity prices in 1973-74 and again in the late 1970s by expanding production capacity. Hence the commodity price boom contributed to a capital spending boom. The strength in natural resource industries contributed to investors aggressively bidding up stock prices of energy and mining companies which, in turn, further encouraged capital formation in these sectors. Investment by raw material producers created a strong demand for related products such as pipelines, steel and heavy equipment so investment in other sectors benefited as well. In addition to its favourable impact on capital spending, the heavy world demand for raw materials, associated with the commodity price explosion, was a boon to Canadian exports of raw materials and

materials in the intermediate stage of production. Typically these materials account for between 60% and 70% of Canada's total merchandise exports. Thus in the late 1970s strength in the export and business fixed investment sectors somewhat masked the underlying softening trend in other key sectors of the economy, notably consumer spending and residential construction.

## 23.2 Influence of the 1970s on the early 1980s

**Effects of inflation.** The economic performance of the early 1980s was very much shaped by the inflationary environment of the 1970s. Investment in the natural resource sectors with the exception of agriculture continued strong through 1980 (Table 23.2). Capital formation by mines, quarries and oil wells grew by over 49% in current dollars in 1980. Investment in the forestry sector was also strong, growing by 14% in 1980 following 24.9% growth in 1979. In addition to the commodity price boom, inflation had an indirect effect on investment in other sectors such as manufacturing, which grew by 31.9% in current dollars in 1980.

Because of the growing concern about inflation, businesses were pushing investment projects ahead before interest and building costs escalated further. As inflationary pressures began to ease in 1981, capital spending in some sectors such as forestry began to slow or decline. But in other sectors such as manufacturing and energy where prices remained firm, capital spending continued to grow at a robust rate in 1981 (31.4% in manufacturing and 19.5% in hydro and gas). In these sectors investment projects often were so large that work which had begun in 1979 or 1980 continued into 1981 thereby serving to buttress the 1981 investment figures.

The investment boom in the late 1970s and early 1980s was a major source of new job creation, and employment continued to grow at a solid pace of over 2.5% into 1980 and 1981. At the same time the general trends of lower productivity and lower real wage rates, which began in 1977, continued (Tables 23.3 and 23.4). Manufacturing, trade and services industries contributed most to the overall decline in productivity. Thus, despite gains in employment, consumer expenditure did not grow at rates comparable to previous economic expansions. Between 1977 and 1981 the highest annual real growth (that is, growth adjusted for inflation) in consumer expenditure was 2.6%, considerably below the average annual growth of 6% for the non-recessionary years between 1950 and 1976.

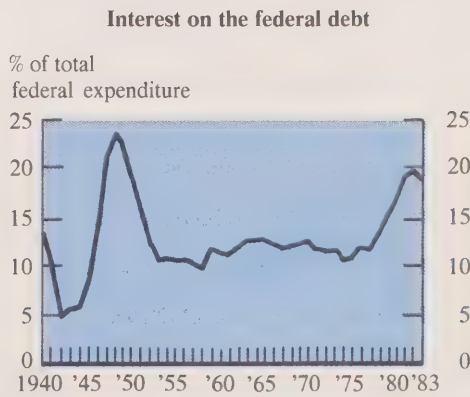
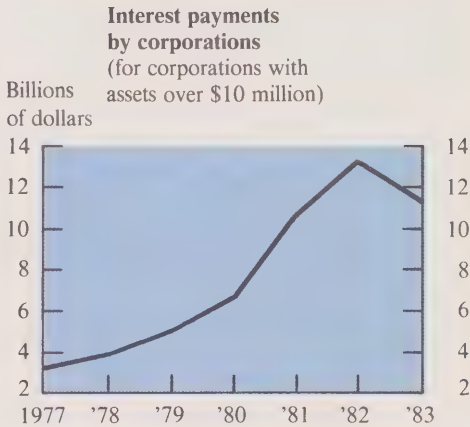
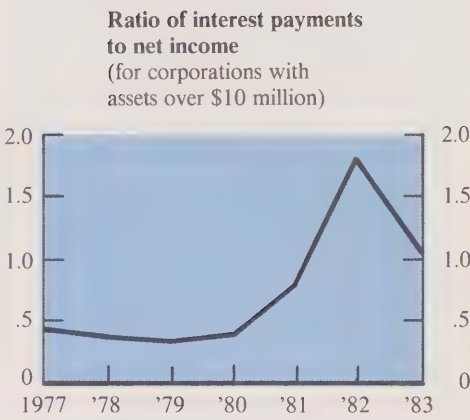
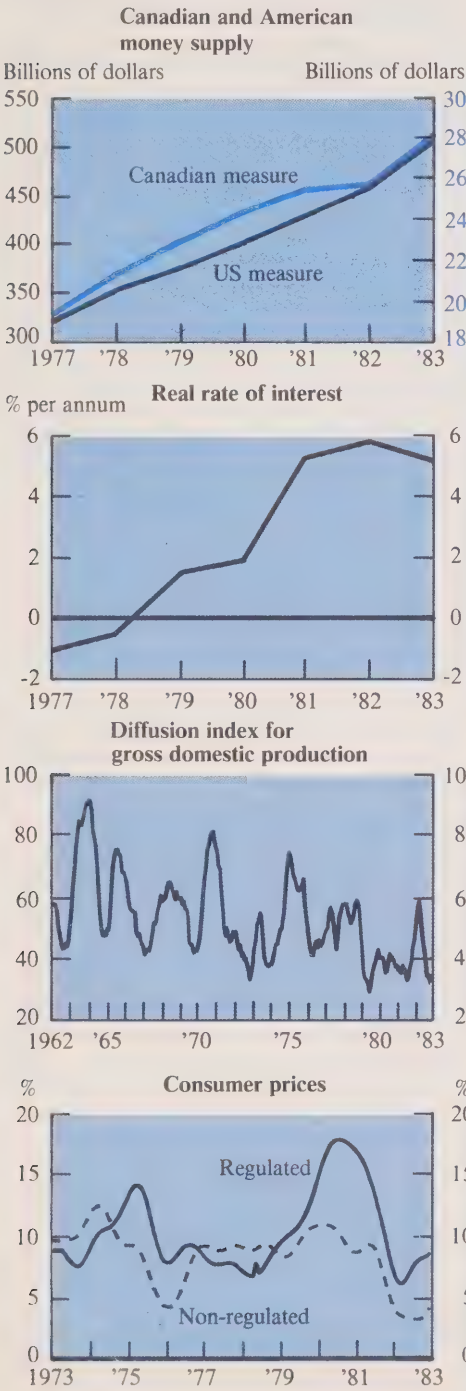
**Higher interest rates.** The experience of the 1970s had an important impact on participants in the financial markets. As the inflation rate continued to climb through much of the 1970s, savers began to

realize that they were not earning a return that was as high as the inflation rate on most goods. On the other hand, borrowers were able to profit from the fact that what they were buying with borrowed money was often rising in price more than enough to offset the interest costs on loans. Hence, people began to learn that it was more advantageous to borrow and buy on credit than to lend. As the inflationary psychology continued into the 1980s, borrowers became more anxious to borrow while savers became increasingly reluctant to save. In order to obtain additional funds, borrowers were forced to offer savers higher rates of interest. This was one of the major reasons for the sharp jump in interest rates in the 1980s (Table 23.5).

**Control of monetary growth.** As inflation persisted, monetary authorities in both Canada and other industrialized countries resolved to bring down inflation. Since accelerating money supply growth had preceded an acceleration in the inflation rate throughout the 1970s, financial market participants and central bankers alike became more sensitive to the rate of monetary growth. Consequently, in late 1979 the Federal Reserve Board (FRB) of the United States announced that it intended to focus its attention on controlling the growth of the money supply rather than on smoothing out interest rate fluctuations. In general the FRB was successful in bringing down monetary growth from 1980 to 1982. For example the growth of M1, or the amount of currency and bank demand deposits held by the general public, declined from 7.7% in 1979 to 6.6% in 1982. During this period, because of the weakness in the Canadian dollar vis-à-vis the US dollar (Table 23.5), Canadian monetary policy was considerably more restrictive than that of the United States. Canadian money supply growth as measured by M1 fell from an annual rate of growth of 10.1% in 1978 to 0.6% in 1982. Foreign exchange market conditions and a more restrictive monetary policy by the Bank of Canada led to a sharp increase in the interest rate differential between Canada and the United States (Table 23.5). The deceleration in monetary growth and a deep-rooted fear of inflation on the part of financial market participants combined to produce the highest ex-post real rates of interest that had been seen in North America for some time. The ex-post real rate of interest, which is simply the actual market rate of interest on a given financial instrument such as a term deposit or treasury bills, less the actual rate of inflation over the holding period of that same instrument, is a measure of the cost of borrowing when inflation is taken into account. The ex-post real interest rate on 90-day Government of Canada treasury bills is shown in Chart 23.1.

**Volatile economic activity.** Volatility in interest rates and money supply growth were major factors contributing to fluctuating economic activity in the early part of the 1980s. Table 23.6 shows the

Chart 23.1  
Selected economic indicators



quarterly fluctuations in real aggregate spending from 1979 to 1983. In late 1979 to early 1980 as money supply growth slowed and interest rates rose sharply, the Canadian economy went into a recession. Pulling the economy down were the credit-sensitive sectors, notably residential construction, consumer durables and merchandise exports. Business fixed investment also faltered somewhat in the second quarter of 1980. In the spring of 1980 as the full effects of the recession were felt, interest rates plunged. Then the money supply increased sharply from June to November 1980. Although the combination of the sharp drop in interest rates and the increase in the money supply enabled the economy to recover by the third quarter of 1980, inflation appeared to be increasing again. Accordingly from late 1980 to mid-1982 both the Federal Reserve Board and the Bank of Canada further restricted monetary growth and North American interest rates climbed to historically high levels. The high interest rates of late 1980 and all of 1981 in turn caused the Canadian economy to relapse into recession in the second half of 1981. This recession proved to be deeper, more widespread and longer than all of the post-World War II recessions, as economic activity declined for six consecutive quarters from the third quarter of 1981 to the fourth quarter of 1982. The 1981-82 recession was the steepest by any standard since the Great Depression years of the 1930s.

In fact the six quarters of the 1981-82 recession lasted two quarters longer than any previous post-war recession. The 6.6% peak-to-trough decline in real gross national expenditure for the 1981-82 recession was much deeper than the 3.1% drop in the 1953-54 recession which had been the deepest previous post-war decline. In addition the sharp drop in the diffusion index in the 1981-82 period (Chart 23.1) indicates that this recession was more widely spread among Canadian industries than previous post-war recessions. The diffusion index shown in the chart measures the percentage of industries in the economy that are expanding. A discussion of other recessions is provided in *The business cycle in Canada 1950-1981*, Philip Cross, Current Economic Analysis, Statistics Canada 13-004, March 1982.

Apart from Canada, the global economy was experiencing a similarly severe recession. Accordingly in the summer of 1982 the Federal Reserve Board allowed the growth of the money supply to accelerate sharply. The US measure of M1 grew by 13.9% from June 1982 to June 1983 in contrast to a 5.4% rate in the previous year. The Bank of Canada took similar action, letting the Canadian money supply grow by 8.6% in the six-month period from August 1982 to February 1983. The action of accelerating money growth coupled with the weak demand for funds because of the recession contributed to a sharp drop in North American interest rates. For instance the

Canadian prime lending rate, the rate that banks charge their most credit-worthy customers, fell from 18.25% in June 1982 to 12.5% by the end of 1982. The drop in interest rates gave a strong boost to the credit-sensitive sectors of the economy such as consumer durables and residential construction. In addition the American economy rebounded strongly in 1983 which enabled Canadian exports to increase sharply. The strength of these sectors helped lead the Canadian economy out of recession and into recovery in 1983.

## 23.3 Sectoral breakdown

### 23.3.1 Prices

**Industry selling price index.** The more restrictive monetary and fiscal policies of the late 1970s and early 1980s contributed to a marked reduction in the overall inflation rate but the progress was initially more noticeable at the producer level than at the consumer level. The rate of increase in the industry selling price index (ISPI) declined steadily from 14.5% in 1979 to 3.5% in 1983 (Table 23.7). The inflation rate eased substantially for the primary metals, wood and paper components of the ISPI. Just as prices in these industries benefited most from the speculation associated with the increase in inflationary expectations during the 1970s, so too they suffered most as a result of the emergence of the steep recession in 1981-82 and the associated easing inflationary expectations. The rate of increase in food prices steadily decelerated as a result of bumper crop yields in North America and a global recession which suppressed demand. In addition, the strong performance of the North American currencies in 1981 and 1982 vis-à-vis the European and Japanese currencies also served to restrain export demand for food. Energy prices were somewhat out of gear with the trend in other prices as the petroleum and coal component of the ISPI increased by 36.4% in 1981 and 15% in 1982. Despite a softening in world oil prices, the federal-provincial energy price agreement in 1981 allowed Canadian energy prices to advance more rapidly toward world levels and they increased substantially in 1981 and 1982.

**Consumer price index.** In contrast to the ISPI, the inflation rate for the consumer price index (CPI) eased much more slowly (Table 23.8), rising from an annual growth rate of 10.2% in 1980 to 12.5% in 1981 and then easing to 10.8% in 1982. In the last two quarters of 1982, however, there was a pronounced deceleration in the inflation rate for the CPI. The transportation component of the CPI which rose 18.4% in 1981 and 14.1% in 1982, and the housing component which rose 12.4% in 1981 and 12.5% in 1982, were largely responsible for keeping the increase in the CPI at a relatively high rate in 1981 and 1982. The strong advance in the transportation

component was largely due to the sharp increase in retail energy prices as Canada moved toward the world price level, while the housing component was strongly influenced by the sharp increase in mortgage rates. Part of the reason for the slower decline in the inflation rate for the CPI vis-à-vis that for the ISPI might be traced to the CPI's higher content of regulated prices, which tend to respond more slowly to changes in the conditions of demand and supply than do market-determined prices. For a more detailed explanation of this point, see *The behaviour of regulated prices in the consumer price index*, Karen Wilson, Current Economic Analysis, Statistics Canada 13-004, August 1981. A comparison of regulated and non-regulated prices is presented in Chart 23.1.

In 1983 the inflation rate for the CPI fell to 5.8%, bringing it more closely into line with that for the ISPI. Despite the economic recovery in 1983, inflation continued to ease as many commodities remained in a state of oversupply. The combination of conservation measures by consumers and increased worldwide investment in energy exploration helped to keep oil prices weak. Furthermore, many of the lesser-developed countries were increasing the supply of commodities on world markets in order to finance their large foreign debt burdens. In addition to soft commodity prices, unit labour costs were held down by union wage concessions made during the 1981-82 recession. The high level of unemployment during this recession made job security rather than increases in pay a greater concern to workers. A notable example was in the auto industry.

### 23.3.2 Business sector

**Growing financial burden.** The apparent lack of progress on the inflation front in consumer prices in the early 1980s may have contributed to the persistent concern about inflation on the part of the financial markets. In addition the Bank of Canada remained concerned about the inflation problem so that the growth of money supply was tightly controlled. Thus interest rates remained high, particularly in the summer of 1981, despite an easing in the rate of inflation for industry selling prices. Because of the high real rates of interest, borrowing became a heavy burden. That is, slower growth in business revenues resulting from a slackening in industrial prices and a lower volume of sales made it more difficult for many firms to service the interest on their debts. This is borne out by Chart 23.1 which plots the ratio of total interest payments by firms to their net income. The chart also illustrates the increasing burden that high interest rates put on corporations. The weakening financial position of many Canadian corporations forced them to adopt some strict cost-cutting measures, some of which involved scaling back capital spending programs.

**Decline in investment.** Because of the progress made by most of the industrialized countries in slowing the rate of inflation, the worldwide *speculative* demand for commodities slowed markedly in 1981 and 1982 with many commodity prices actually falling substantially. This is illustrated by the raw materials price index in Table 23.9. Non-ferrous metal prices with declines of 18.5% in 1981 and 15.1% in 1982, and wood prices with a decline of 7.6% in 1982, were notably weak. Furthermore, the combination of a global recession, conservation measures by consumers and increased worldwide investment in energy exploration contributed to a world oil glut. Thus the previously held expectations in early 1980 of energy prices rising from 15% to 20% a year throughout the decade were revised dramatically downward in 1982 to expectations of flat or declining prices. Since much of the investment in the natural resource sectors of the economy was undertaken on the assumption that prices would continue climbing sharply, the capital spending plans of natural resource firms were drastically reduced. Because of the weakness in commodity prices and the high real rates of interest, business investment which had helped to carry the economy from 1979 to the end of 1981 faltered badly in 1982. Real spending on non-residential construction fell 7.2% while spending on machinery and equipment fell 10.9% for the year.

Business investment continued to decline in 1983 despite the emergence of a global economic recovery. Real expenditure on non-residential construction fell a further 16.2% while real machinery and equipment investment dropped by 8.8%. The continued weak outlook for oil and other commodity prices, particularly metals, helped to depress business investment. In addition the severity of the previous recession left many businessmen more concerned with restoring their balance sheets than with expanding their output. High levels of unused plant capacity also provided little incentive for new investment.

### 23.3.3 Household sector

**Consumer spending and employment.** As a result of the sharp decline in capital spending, those sectors of the economy which had been sources of strength became major sources of weakness. In addition the decline in investment further weakened the already weak sectors of the economy. Layoffs in the construction and manufacturing sectors particularly (Table 23.10) had an impact on growth in consumer expenditure which, due to the steady decline in real wage rates, had been heavily dependent on employment as a source of growth. For 1982 as a whole the level of employment declined for the first time since 1958. As Table 23.10 shows, employment declined in all major industry groups. At the same time, the average monthly unemployment rate for all persons of 15 years and over who were in the labour force

climbed to 11% in 1982 (Table 23.11), its highest level since the Great Depression years of the 1930s. The decline in real disposable income and its associated harmful effects on consumer confidence contributed to a decline of 2.5% in real personal expenditure for 1982, the first such decline since 1948. The high real rates of interest which encouraged consumers to save and discouraged them from borrowing, together with the high degree of uncertainty created by a sharply rising unemployment rate, prompted many consumers to postpone major purchases. Consequently, real spending on consumer durables fell by 8.2% and on semi-durables by 3.3% in 1982 (Table 23.12). Even real spending on consumer services, which had almost been immune to the ill-effects of previous recessions, fell slightly in 1982. The combination of high real rates of interest and negative growth in real disposable income contributed to a severe decline of 21% in residential construction (Table 23.1).

However, the major sources of weakness in 1981 and 1982 became sources of strength in 1983. The sharp drop in interest rates in the latter part of 1982 provided a strong stimulus to spending on consumer durables (up 10.6%), and residential construction climbed in real terms by 24.4%. Overall, the 3.1% real growth in personal expenditure in 1983 exceeded the decline in 1982. But employment did not recover to the same extent. Growth in employment of 0.8% was insufficient to keep pace with growth in the labour force of 1.9%, so the average monthly unemployment rate in 1983 climbed to 11.9%. The severity of the 1981-82 recession led many firms to be more cost conscious and reluctant to hire new employees.

### 23.3.4 Government sector

As interest rates rose from 1977 to 1980, the interest charges on the federal debt rose accordingly. In fact, the interest on the debt became an increasingly significant portion of total federal government expenditure. Chart 23.1 reveals that interest payments as a share of total federal government expenditure reached their highest level since the late 1940s, years which were associated with the debts incurred as a result of World War II. With personal tax increases constrained by the declining growth in real wages, and the Bank of Canada's more restrictive policy toward monetary growth, there was little room for growth in government expenditure without increasing the public debt. Consequently the rate of increase in expenditure by all levels of government slowed markedly from the rates of the early 1970s (Table 23.1) and the late 1960s. Between 1980 and 1983, real government expenditure grew by less than 1% in every year but 1981 when growth was 2.5%. This was well below the average annual growth in government expenditure of 5.6% between the years 1960 to 1975. Thus on average over the years 1980 to 1983 government spending did not provide a strong stimulus to economic activity.

### 23.3.5 International sector

**Favourable trade balance.** Largely as a result of the steep recession, the Canadian trade balance improved dramatically, with the first surplus in the current account balance since 1973 being recorded in 1982 (Table 23.13). This surplus was also the largest in Canadian history. The main reason for the surplus was a sharper decline in imports than in exports. In real terms imports declined in 1982 by 11.2% as compared to a decline of 1.6% for exports. There were two major factors behind the improvement in the trade balance. First, a steady depreciation in the value of the Canadian dollar relative to the US dollar served to discourage Canadian imports while at the same time encouraging exports. Second, the Canadian economy weakened more than that of the United States, Canada's largest trading partner. Real gross national expenditure declined 6.6% during the 1981-82 recession in Canada as compared to a 3.0% drop in the United States. Hence Canadian imports were affected more severely than were exports.

**Merchandise imports.** Weakness in merchandise imports was widespread among all import categories (Table 23.14). Although motor vehicle imports fell in line with the decline in personal expenditure on consumer durables, other import categories were considerably weaker. The drop in business fixed investment in 1982 led to sharp declines in both machinery and equipment imports (16.7% in current dollar terms) and crude material imports (29.5% in current dollar terms). This was a complete reversal of the situation in 1980 when investment was buoyant and these import categories increased strongly, 42.8% for crude materials and 19.0% for machinery and equipment.

**Merchandise exports.** Exports of motor vehicles and parts as well as food were the major sources of strength in total merchandise exports in both 1981 and 1982 (Table 23.15). The 24.7% increase in current dollar exports of motor vehicles and parts in 1982 was largely responsible for limiting the decline in total real merchandise exports to 1.6%.

With the strong economic recovery in the United States in 1983, Canadian exports grew by 6.4% in real terms. Motor vehicle exports continued to flourish in response to the strong growth in disposable income in the United States and a more stable American interest rate environment.

**Current account balance.** Although the current account balance remained in surplus for 1983, the size of the surplus fell by about \$1 billion to \$1.7 billion. As the Canadian economy recovered in 1983, real import growth of 8.1% exceeded that of exports. An increase of 28% in current dollar motor vehicle imports contributed to the decline in the current account merchandise trade balance. This increase resulted from the improved interest rate picture in Canada and the rebound in disposable

income. The continued weak investment climate in Canada in 1983 contributed to further declines of 17.4% in crude material and machinery and 2.9% in equipment imports in current dollar terms.

**Travel deficit.** Almost all of the decline in the current account surplus was due to an increase in the non-merchandise trade deficit. In particular, the travel deficit increased by almost \$1 billion. Strength in the Canadian dollar against the overseas currencies served to encourage travel abroad and at the same time discouraged overseas visitors from coming to Canada. Of the increase in the travel deficit, \$600 million was due to an increase in the deficit with countries other than the United States.

### 23.4 Regional economies

**Resource-based regions.** Macro-economic conditions had a major impact on the pattern of regional economic activity in the early 1980s. The high level of inflationary expectations which encouraged the speculative demand for commodities tended to benefit those parts of the country most dependent on natural resources. Alberta with its energy resources and British Columbia with its forestry and mining industries did relatively better in 1980 (Tables 23.16 - 23.18) than other parts of the country. For instance, in 1980, the rate of growth in employment (Table 23.16), business fixed investment (Table 23.17), and retail trade (Table 23.18) was generally strongest in Alberta and British Columbia.

**Capital spending and employment.** Since investment in the natural resource industries stimulates investment in manufacturing, growth in capital spending was relatively strong in Ontario in 1980 and 1981. However, this strength in investment did not encourage employment growth to the same extent as it appeared to do in Alberta and British Columbia. The weaker employment growth in Ontario also contributed to its weaker rate of growth in retail trade. In Quebec, despite rich natural resources, economic activity lagged behind that of Alberta, British Columbia and Ontario. This weaker relative performance in Quebec was part of a trend that had been developing since 1977.

The strength in commodity prices, particularly of oil, improved the economic outlook for the Atlantic region. In 1980 some favourable oil and gas test results in the Hibernia area helped to make investment in the Atlantic region more attractive. This was translated into increased capital spending in 1981 and 1982 and helped to make the Atlantic provinces the only ones

which did not experience a decline in current dollar business investment in 1982. However the increase in capital spending did not appear to benefit employment to the same extent. The 3.2% decline in employment in the Atlantic region in 1982 was surpassed only by the declines of 5.2% in British Columbia and Quebec.

**Effects of decelerating inflation.** As inflationary expectations and commodity prices began to ease in 1981, some of the natural resource industries began to weaken, notably mining and forestry. This development was magnified in 1982 as the inflation rate decelerated substantially. Consequently, British Columbia suffered the most of all provinces in 1982 with the largest decline in capital spending. It was tied with Quebec for the dubious distinction of having the largest decline in employment and was the only province to record a decline in current dollar retail sales. Since the 1981-82 recession took a heavy toll on the consumer durable goods industry, the Quebec and Ontario economies suffered severe damage. The combination of the global recession in 1981-82 and a bumper North American food crop caused many farm prices to fall substantially. Manitoba and Saskatchewan, which depend most heavily on agriculture, were seriously hurt by the recession. In fact, after British Columbia, the biggest declines in fixed investment spending occurred in Saskatchewan and Manitoba. Alberta was not immune to the recession either. The energy industry slumped in 1982 in the face of a world oil glut. As a result, capital spending in current dollar terms as well as employment declined in Alberta. However, the declines were relatively smaller than in most other parts of the country.

**Prospects.** The developments in 1981-82 would probably affect the pattern of regional economic activity over the next few years. The world oil glut, for instance, has caused many analysts to change their price outlook. Expectations of 15% to 20% annual increases in oil prices have been toned down drastically. This in turn has affected the outlook for other commodity prices. Consequently, as the economy recovered in 1983, the provinces most dependent on natural resources as a source of income did not rebound as much as the other provinces. In Alberta and British Columbia, for instance, in contrast to the other provinces, employment continued to decline. Similarly, these were the only provinces to show a decline in current dollar business investment in 1983. Quebec and Saskatchewan enjoyed the highest growth in employment in the first year of recovery, while Saskatchewan and Manitoba experienced the strongest growth in capital formation.

**Source**

Econometric Analysis Division, Statistics Canada. Compiled by Bruce Nichols.

**Selected references**

Various issues of the following publications:

*Bank of Canada review.* Bank of Canada (monthly), Ottawa.

*The Canadian balance of international payments.* Statistics Canada 67-001 (quarterly), Ottawa.

*The consumer price index.* Statistics Canada 62-001 (monthly), Ottawa.

*Employment, earnings and hours.* Statistics Canada 72-002 (monthly), Ottawa.

*Gross domestic product by industry.* Statistics Canada 61-213 (annual), Ottawa.

*Imports by commodities.* Statistics Canada 65-007 (monthly), Ottawa.

*Industry price indexes.* Statistics Canada 62-201 (annual), Ottawa.

*The labour force.* Statistics Canada 71-001 (monthly), Ottawa.

*National income and expenditure accounts.* Statistics Canada 13-001 (quarterly), Ottawa.

*Private and public investment in Canada.* Statistics Canada 61-206 (annual), Ottawa.

*Private and public investment in Canada: outlook.* Statistics Canada 61-205 (annual), Ottawa.

*Retail trade.* Statistics Canada 63-005 (monthly), Ottawa.

## TABLES

..	not available	e	estimate
...	not appropriate or not applicable	p	preliminary
—	nil or zero	r	revised
--	too small to be expressed	certain tables may not add due to rounding	

### 23.1 Income and expenditure aggregates in 1971 dollars

Year	Percentage growth rates							
	Personal expenditure	Government current expenditure	Residential construction	Non-residential construction	Machinery and equipment	Exports	Imports	Gross national expenditure
1971	7.9	4.1	29.5	4.1	2.6	4.5	6.9	6.9
1972	7.6	3.1	12.8	-1.4	9.6	6.6	11.2	6.1
1973	6.7	4.6	9.8	9.2	20.0	10.6	13.6	7.5
1974	5.1	4.0	-0.5	7.6	7.8	-2.0	9.8	3.6
1975	5.2	4.0	-7.3	13.4	3.4	-6.4	-2.8	1.2
1976	6.4	0.9	19.6	-2.8	4.6	9.6	8.7	5.8
1977	2.4	3.2	-5.1	4.8	-2.0	7.3	1.6	2.0
1978	2.6	1.7	-1.7	1.3	0.8	10.5	4.6	3.6
1979	2.0	0.3	-2.7	13.4	12.1	3.0	6.9	3.2
1980	1.0	0.4	-7.6	10.7	4.3	1.8	-2.5	1.1
1981	1.7	2.5	3.9	8.3	7.1	3.1	4.5	3.3
1982	-2.0	0.7	-21.0	-7.2	-10.9	-1.6	-11.2	-4.4
1983	3.1	0.3	24.4	-16.2	-8.8	6.4	8.1	3.3

Source: *National income and expenditure accounts*, Statistics Canada 13-531.

### 23.2 Gross fixed capital formation by industry

Year	Percentage growth rates of current dollar figures							
	Agriculture	Forestry	Mines, quarries and oil wells	Manufacturing	Transportation	Communication	Hydro and gas	Finance
1971	13.3	4.4	30.4	-7.7	10.8	13.8	7.5	33.1
1972	29.9	24.5	-8.3	-0.7	10.6	9.0	1.9	23.9
1973	29.9	53.0	3.6	24.0	21.2	18.0	24.9	28.6
1974	22.4	36.3	19.3	33.0	2.2	39.3	21.6	19.8
1975	25.2	-19.7	29.2	12.5	23.2	14.0	41.8	6.9
1976	18.1	-4.6	32.5	0.5	-11.9	9.9	6.7	30.3
1977	4.4	17.6	13.2	11.2	11.0	3.8	15.6	5.6
1978	16.1	9.5	0.3	0.5	7.5	2.9	21.9	7.7
1979	25.5	24.9	45.3	21.5	27.8	8.7	7.2	8.7
1980	2.1	14.0	49.5	31.9	25.4	18.7	-1.8	1.9
1981	8.7	-17.8	12.2	31.4	54.9	14.7	19.5	16.3
1982	-8.5	-48.2	-2.0	-13.3	6.6	0.2	17.1	-18.9

Source: *Private and public investment in Canada*, Statistics Canada 61-206.

### 23.3 Output per worker by industry<sup>1</sup>

Year	Agriculture	Manufacturing	Construction	Trade	Finance	Services	Total economy
1971	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1972	94.7	104.4	101.9	103.6	105.5	101.3	102.8
1973	105.7	109.2	96.3	106.6	107.2	101.8	105.6
1974	97.2	110.2	92.2	109.9	104.8	103.2	106.0
1975	109.4	109.7	93.6	108.2	105.9	102.4	105.1
1976	119.6	113.6	93.9	112.7	106.3	104.8	108.3
1977	125.3	117.8	92.9	112.7	105.2	101.7	109.3
1978	121.0	119.2	90.7	113.1	108.0	100.6	109.0
1979	106.7	119.1	92.3	113.2	110.7	98.6	107.1
1980	117.7	113.4	94.6	111.6	104.7	97.3	107.1
1981	124.1	114.0	95.8	110.2	112.1	96.7	107.1
1982	135.7	111.1	94.4	104.7	111.5	97.3	106.0
1983	129.8	120.6	97.7	109.0	113.4	94.7	108.0

<sup>1</sup>An index of employment was constructed in which 1971 = 1.0; the index for industry output has a base of 1971 = 100.  
Sources: *Gross domestic product by industry*, Statistics Canada 61-213; *The labour force*, Statistics Canada 71-001.

### 23.4 Average hourly earnings by industry<sup>1</sup> in 1971 dollars

Year	Manufacturing	Construction	Mining
1971	3.28	4.75	4.04
1972	3.38	4.92	4.14
1973	3.42	5.04	4.28
1974	3.50	5.14	4.40
1975	3.65	5.43	4.70
1976	3.87	5.83	4.97
1977	3.97	6.08	5.04
1978	3.90	5.87	5.00
1979	3.89	5.79	5.05
1980	3.89	5.75	5.13
1981	3.87	5.79	5.16
1982	3.90	5.65	5.31

<sup>1</sup>Average hourly earnings deflated by the consumer price index (1971 = 1.0). The survey of hourly earnings, source of this data, was changed in March 1973.

Sources: *Employment, earnings and hours*, Statistics Canada 72-002; *The consumer price index*, Statistics Canada 62-001.

### 23.5 Credit and exchange market figures<sup>1</sup>

Year	Prime rate	91-day treasury bill rate	Long-term Canada bond rate	Conventional mortgage rate	Canada-US commercial paper interest rate differential	Canadian dollar in US cents
1971	6.48	3.62	6.95	9.43	-0.66	99.03
1972	6.00	3.55	7.23	9.21	0.27	100.95
1973	7.65	5.39	7.56	9.59	-1.09	99.99
1974	10.75	7.78	8.90	11.24	0.18	102.26
1975	9.42	7.37	9.03	11.43	1.67	98.33
1976	10.04	8.89	9.18	11.78	3.87	101.44
1977	8.50	7.35	8.70	10.36	1.73	94.10
1978	9.69	8.58	9.27	10.59	0.51	97.72
1979	12.90	11.57	10.21	11.97	0.64	85.38
1980	14.25	12.71	12.48	14.32	0.12	85.54
1981	19.29	17.78	15.22	18.15	2.44	83.42
1982	15.81	13.83	14.26	17.89	2.01	81.08
1983	11.17	9.32	11.79	13.29	0.25	81.14

<sup>1</sup>Interest rates and exchange rate are annual averages of monthly levels.  
Source: *Bank of Canada review*.

23.6 Income and expenditure aggregates in 1971 dollars, quarterly percentage growth rates

Year and quarter	Personal expenditure	Government current expenditure	Residential construction	Non-residential construction	Machinery and equipment	Exports	Imports	Gross national expenditure
1979 I	1.4	-0.9	-0.8	4.1	2.4	1.7	1.1	1.3
II	-0.2	1.8	-2.1	6.4	0.6	-4.2	-0.5	0.3
III	0.2	-1.5	1.6	7.8	8.3	5.5	2.3	0.8
IV	—	-0.2	0.1	0.5	—	-2.7	-1.5	0.2
1980 I	0.6	-1.0	-1.0	4.2	-1.5	3.2	0.7	0.7
II	-0.7	1.4	-12.6	-1.4	-1.5	-3.7	-4.4	-1.0
III	1.5	1.6	3.1	1.9	5.5	1.1	-2.3	0.2
IV	1.0	-0.2	4.7	2.2	0.9	5.5	5.6	1.7
1981 I	0.5	-0.2	5.8	4.7	3.4	-1.8	1.4	2.1
II	0.5	0.7	5.5	0.8	2.7	3.5	2.8	1.0
III	-1.0	1.3	-8.6	-0.2	-1.8	-2.9	0.4	-1.0
IV	-0.2	1.8	-11.8	2.9	-1.9	0.6	-3.6	-0.8
1982 I	-1.5	-2.6	-5.1	-2.1	-3.9	-2.0	-6.5	-2.3
II	0.2	1.2	-8.9	-4.9	-6.5	2.3	-1.9	-1.1
III	-0.4	0.6	-3.9	-8.2	-1.4	1.9	-1.5	-0.7
IV	0.2	-0.1	14.1	1.4	-0.5	-8.2	-4.7	-0.9
1983 I	1.1	-1.6	8.5	-7.6	-5.9	5.1	5.1	2.0
II	1.5	0.9	18.3	-5.1	-3.1	4.0	3.7	1.8
III	1.3	0.9	-4.0	-2.6	2.8	1.8	7.0	1.9
IV	0.9	1.0	-9.6	0.6	2.2	9.3	5.4	1.2

Source: *National income and expenditure accounts*, Statistics Canada 13-001.

23.7 Industry selling price index annual inflation rate<sup>1</sup>

Year	Food and beverages	Textiles	Wood	Furniture and fixtures	Paper <sup>*</sup>	Primary metals	Metal fabricating	Motor vehicles	Petroleum and coal	Chemical	Non-metallic minerals	Total
1971	2.9	-2.1	11.6	2.8	0.2	-3.3	...	2.4	10.1	1.0	1.7	1.9
1972	8.7	-0.8	22.2	5.7	0.9	2.2	4.7	2.9	2.7	1.4	4.1	4.4
1973	28.9	10.0	24.3	10.0	11.1	15.0	7.8	-0.2	14.1	5.0	4.7	11.2
1974	18.0	20.1	-1.9	20.7	35.3	25.7	19.7	7.2	36.0	28.6	14.5	18.9
1975	10.4	1.1	1.5	9.3	17.7	8.8	12.7	7.8	15.3	17.0	18.0	11.3
1976	1.6	6.5	11.0	6.6	2.4	5.7	6.6	4.0	14.4	4.3	10.8	5.1
1977	7.0	5.5	12.4	5.8	5.9	12.1	6.1	8.2	16.3	5.0	8.8	7.9
1978	10.6	6.2	19.4	6.2	5.5	9.0	9.3	8.6	23.7	7.6	8.3	9.2
1979	12.7	13.2	15.8	13.8	17.3	24.6	12.4	12.2	16.7	13.5	9.2	14.5
1980	10.7	12.8	-6.2	12.0	15.7	19.1	10.0	11.9	25.9	17.1	11.9	13.5
1981	8.9	11.9	0.3	10.5	10.4	1.4	10.0	12.2	36.4	13.8	15.2	10.2
1982	5.4	3.6	-2.8	9.2	3.6	-0.6	8.5	4.3	15.0	7.1	12.8	6.0
1983	3.5	1.7	11.0	4.3	-3.1	3.2	2.2	3.9	6.4	3.1	4.5	3.5

<sup>1</sup>Annual inflation rates are based on the average of the monthly price levels.Source: *Industry price indexes*, Statistics Canada 62-011.

**23.8 Consumer price index annual inflation rate<sup>1</sup>**

Year	Food	Housing	Clothing	Transportation	Health and personal care	Recreation	Tobacco and alcohol	All items
1971	1.1	4.6	1.5	4.1	2.0	3.3	1.7	2.8
1972	7.6	4.6	2.6	2.6	4.8	2.8	2.7	4.8
1973	14.6	6.5	4.9	2.7	4.9	4.2	3.1	7.6
1974	16.3	8.7	9.6	9.9	8.6	8.8	5.5	10.9
1975	12.9	10.0	6.0	11.7	11.4	10.4	12.0	10.8
1976	2.7	11.1	5.6	10.8	8.5	6.0	7.1	7.5
1977	8.3	9.4	6.8	7.0	7.4	4.7	7.1	8.0
1978	15.5	7.5	3.9	5.8	7.2	3.9	8.1	8.9
1979	13.2	7.0	9.2	9.7	9.1	6.9	7.2	9.2
1980	10.7	8.1	11.7	12.8	9.9	9.5	11.2	10.2
1981	11.4	12.4	7.1	18.4	10.9	10.1	12.9	12.5
1982	7.2	12.5	5.6	14.1	10.6	8.7	15.5	10.8
1983	3.7	6.8	4.0	5.0	7.0	6.5	12.6	5.8

<sup>1</sup>Annual inflation rates are based on the average of the monthly price levels.

Source: *The consumer price index*, Statistics Canada 62-001.

**23.9 Raw materials price index annual inflation rate<sup>1</sup>**

Year	Textiles	Wood	Ferrous metals	Non-ferrous metals	Coal and petroleum	Animals	Vegetables	Total
1978	1.2	11.2	13.4	13.7	18.3	21.5	-0.3	14.9
1979	12.2	27.7	19.9	42.7	12.5	18.2	15.1	17.8
1980	16.9	5.2	-0.8	36.6	18.7	2.6	26.4	14.5
1981	13.3	1.9	5.1	-18.5	46.7	5.4	-1.3	19.1
1982	-5.2	-7.6	-5.6	-15.1	20.6	4.5	-15.3	8.3
1983	-0.7	2.3	1.7	15.9	7.6	-2.3	6.5	5.3

<sup>1</sup>Annual inflation rates are based on the average of the monthly price levels.

Source: *Industry price indexes*, Statistics Canada 62-011.

**23.10 Employment by industry annual percentage growth rates**

Year	Agriculture	Other primary industry	Manufacturing	Construction	Transportation and power	Trade	Finance	Services	Total
1971	0.2	2.5	-0.1	4.7	1.2	0.6	5.1	4.3	2.3
1972	-6.0	-3.1	3.2	1.0	3.9	6.1	-0.2	3.4	3.0
1973	-2.9	4.8	5.7	9.2	5.6	6.0	6.5	4.0	5.0
1974	1.0	2.2	2.7	8.6	2.0	5.0	8.5	4.3	4.2
1975	1.8	-4.0	-5.4	3.0	2.7	3.7	3.1	5.5	1.7
1976	-2.2	6.6	2.7	5.2	1.5	0.5	4.7	2.1	2.1
1977	-1.6	3.0	-1.7	-0.2	-0.6	2.1	7.1	4.7	1.8
1978	2.1	7.5	3.6	—	4.9	3.6	2.9	4.4	3.5
1979	2.1	5.9	5.9	1.5	5.1	4.0	1.5	5.0	4.1
1980	-1.1	9.0	1.9	-3.0	0.4	1.6	10.3	4.8	3.0
1981	1.2	7.7	0.5	4.3	0.6	2.6	-2.9	5.5	2.8
1982	-4.7	-16.1	-9.1	-8.3	-3.0	-1.9	1.2	0.5	-3.3
1983	3.1	3.9	-2.3	-5.3	-1.7	0.1	0.3	4.2	0.9

Source: *The labour force*, Statistics Canada 71-001.

### 23.11 Unemployment and related statistics

Year	Labour force <sup>1</sup>	Employment <sup>1</sup>	Unemployment rate <sup>2</sup>	Participation rate <sup>3</sup>
1971	2.9	2.3	6.2	58.1
1972	3.0	3.0	6.2	58.6
1973	4.3	5.0	5.5	59.7
1974	3.9	4.2	5.3	60.5
1975	3.5	1.7	6.9	61.1
1976	2.3	2.1	7.1	61.1
1977	2.9	1.8	8.1	61.6
1978	3.8	3.5	8.3	62.7
1979	3.1	4.1	7.4	63.4
1980	3.0	3.0	7.5	64.1
1981	2.9	2.8	7.5	64.8
1982	0.5	-3.3	11.0	64.1
1983	1.9	0.8	11.9	64.4

<sup>1</sup>Expressed as annual growth rates.

<sup>2</sup>Unemployment as a percentage of the labour force.

<sup>3</sup>Labour force as a percentage of the total population 15 years of age and over.

Source: *The labour force*, Statistics Canada 71-001.

### 23.12 Personal expenditure in 1971 dollars

Year	Percentage growth rates			
	Durables	Semi-durables	Non-durables	Services
1971	14.8	5.1	6.7	6.7
1972	17.8	8.4	5.4	5.6
1973	19.0	7.6	4.0	3.9
1974	5.0	11.9	4.5	3.5
1975	6.6	5.1	3.3	6.0
1976	5.3	7.9	5.1	7.4
1977	2.8	2.2	1.1	3.4
1978	4.2	3.6	0.1	3.4
1979	4.5	0.9	1.4	1.7
1980	-1.6	-1.6	0.6	3.5
1981	0.6	2.8	1.1	2.1
1982	-8.2	-3.3	—	-0.3
1983	10.6	2.1	—	2.7

Source: *National income and expenditure accounts*, Statistics Canada 13-531.

### 23.13 Current account balance

Year	Current dollars (\$'000,000)		
	Merchandise trade	Non-merchandise trade	Total
1971	2,563	-2,132	431
1972	1,857	-2,243	-386
1973	2,735	-2,267	108
1974	1,689	-3,149	-1,460
1975	-451	-4,306	-4,757
1976	1,559	-5,668	-4,109
1977	2,975	-7,309	-4,334
1978	4,315	-9,232	-4,917
1979	4,425	-9,265	-4,840
1980	8,778	-9,892	-1,114
1981	7,328	-13,393	-6,065
1982	17,813	-15,148	2,665
1983	17,705	-16,019	1,686

Source: *The Canadian balance of international payments*, Statistics Canada 67-001.

**23.14 Merchandise imports by commodity**

Year	Percentage growth rates of current dollar levels				
	Crude materials	Fabricated materials	Machinery	Motor vehicles and parts	Food
1972	16.5	13.7	20.3	20.3	21.1
1973	31.1	18.8	21.2	23.5	41.5
1974	101.7	54.0	29.8	15.8	27.0
1975	24.9	-8.6	20.2	16.8	6.6
1976	0.1	2.8	3.7	14.7	7.1
1977	4.9	12.5	7.0	22.0	15.1
1978	10.8	25.2	21.7	15.4	14.5
1979	34.2	35.2	31.4	13.9	10.8
1980	42.8	7.5	19.0	-10.6	14.5
1981	8.3	10.9	14.1	18.2	9.0
1982	-29.5	-17.0	-16.7	-6.9	-5.7
1983	-17.4	15.6	-2.9	28.0	1.3

Source: *Imports by commodities*, Statistics Canada 65-007.**23.15 Merchandise exports by commodity**

Year	Percentage growth rates of current dollar levels				
	Crude materials	Fabricated materials	Machinery	Motor vehicles	Food
1972	9.3	13.2	13.2	12.9	12.5
1973	42.3	24.0	22.3	14.6	36.0
1974	56.1	30.3	33.1	5.2	21.7
1975	0.2	-6.3	24.2	12.8	6.5
1976	2.6	18.9	1.8	28.1	2.2
1977	8.3	22.2	17.1	26.1	9.1
1978	-0.4	28.6	26.3	20.1	14.0
1979	42.4	25.9	31.6	-4.7	18.8
1980	17.2	20.8	12.5	-7.8	31.0
1981	2.8	4.6	19.0	23.8	15.2
1982	-2.3	-10.2	-6.0	24.7	6.7
1983	-3.5	7.9	-1.5	27.6	2.4

Source: *Exports by commodities*, Statistics Canada 65-004.**23.16 Employment by region**

Year	Percentage growth rates						
	Atlantic	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia
1971	2.3	2.2	2.5	2.1	0.3	1.6	3.7
1972	2.5	1.4	4.1	1.9	0.7	4.4	3.7
1973	5.9	5.7	4.4	4.1	2.0	5.3	6.4
1974	3.3	3.0	4.2	4.2	2.3	6.7	6.0
1975	1.1	1.4	1.5	-0.5	4.2	4.6	1.9
1976	0.9	0.9	1.9	2.1	3.4	6.3	2.6
1977	0.3	0.8	1.8	0.6	3.4	5.0	2.9
1978	3.6	2.2	3.4	2.6	1.9	6.5	5.0
1979	3.4	3.5	4.1	2.5	3.2	7.5	3.8
1980	3.3	2.8	1.5	1.6	1.7	7.0	6.0
1981	0.7	1.2	2.9	0.8	1.9	6.8	4.7
1982	-3.2	-5.2	-2.5	-1.5	0.2	-1.7	-5.2
1983	1.7	2.2	0.7	1.4	2.2	-1.5	-0.6

Source: *The labour force*, Statistics Canada 71-001.

**23.17 Gross fixed capital formation by region**

Year	Percentage growth rates of current dollar figures							
	Atlantic	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Canada
1971	14.7	21.4	7.7	-6.8	10.1	9.3	29.8	13.4
1972	-5.2	16.2	10.4	19.5	24.1	11.4	-0.1	10.1
1973	24.7	20.8	17.9	17.8	18.8	23.0	18.6	19.8
1974	21.0	27.0	21.6	20.7	28.9	30.7	19.3	23.5
1975	8.5	24.0	9.3	10.3	41.1	30.7	8.0	16.2
1976	8.4	7.0	8.0	19.2	22.5	39.9	17.5	14.2
1977	-3.8	9.1	5.6	4.7	4.1	11.8	7.6	6.8
1978	13.8	0.9	5.6	6.4	5.4	20.5	10.9	8.1
1979	21.8	9.8	9.8	1.1	29.7	26.4	20.2	15.9
1980	-0.1	8.1	11.8	-0.8	7.1	19.2	27.8	13.4
1981	13.6	7.2	19.0	12.5	21.1	30.2	24.9	20.3
1982	18.0	-4.7	-1.4	-14.1	-13.3	-2.9	-15.0	-3.6
1983	8.4	5.0	1.9	10.5	10.3	-18.2	-8.1	-3.0

Source: *Private and public investment in Canada: outlook*, Statistics Canada 61-205.

**23.18 Retail trade by region**

Year	Percentage growth rates of current dollar figures							
	Atlantic	Quebec	Ontario	Manitoba	Saskatchewan	Alberta	British Columbia	Total
1973	11.1	12.6	11.1	13.7	12.4	12.5	16.5	12.4
1974	17.5	17.4	14.2	16.9	24.2	21.7	16.9	16.8
1975	14.6	14.4	15.6	9.9	17.8	21.9	9.3	14.8
1976	11.0	11.0	10.0	9.9	12.5	16.1	12.4	11.2
1977	6.4	7.7	7.9	4.4	1.9	12.0	9.1	7.9
1978	14.1	10.5	10.9	8.6	11.9	14.7	12.9	11.6
1979	12.1	14.1	9.2	9.2	11.4	18.5	11.8	12.0
1980	5.3	6.5	7.8	7.8	7.8	16.9	15.0	9.1
1981	9.3	8.5	13.7	13.1	12.3	15.9	13.5	12.2
1982	6.6	3.6	5.4	7.0	4.3	0.3	-1.9	3.5
1983	12.6	9.7	11.0	7.0	7.8	3.3	4.2	8.8

Source: *Retail trade*, Statistics Canada 63-005.

**Source**

23.1 - 23.18 Current Economic Analysis Division, Statistics Canada.

## APPENDICES

---

1	Government organizations and related agencies	759
2	Federal legislation	787
3	Economic chronology June 1980 - May 1984	795
4	Canadian honours	805
5	Diplomatic and consular representation	817
6	Books about Canada	823
7	Canada Year Book special articles	843
8	Political update	847
9	Commissions of inquiry	859
10	Constitution	861
	Index	869



## APPENDIX 1

# GOVERNMENT ORGANIZATIONS AND RELATED AGENCIES

The following is a list of federal government departments, commissions, corporations, boards and other agencies as of May 1984, unless otherwise noted. They are described briefly along with the orders-in-council by which they were established or citations from the Statutes of Canada (SC) or the Revised Statutes of Canada (RSC). Legal titles are used to identify the organizations with some federal identity program titles included in brackets.

**Agricultural Products Board.** This board was established under authority of the Emergency Powers Act by order-in-council PC 3415 in 1951 to administer contracts with other countries to buy or sell agricultural products, and to carry out other commodity operations considered necessary or desirable for Canada's needs and requirements. The board was re-established under the Agricultural Products Board Act in 1952 and operates now under RSC 1970, c.A-5. Under the act the minister may require any staff of the agriculture department to provide services for the board.

**Agricultural Stabilization Board.** Established in 1958 as a Crown corporation under the Agricultural Stabilization Act (RSC 1970, c.A-9), the board is empowered to stabilize prices of agricultural products both to assist the industry in realizing fair returns for labour and investment and to maintain a fair relationship between the prices received by farmers and the costs of goods and services that they buy. The act was amended in July 1975 to provide for a revised list of named commodities and to update the formula used to calculate the prescribed prices at which support is provided under the act. Programs under the act are administered by board staff with assistance from the agriculture department. The board reports to Parliament through the minister of agriculture.

**Agriculture, Department of (Agriculture Canada).** This department was established in 1867 and now operates under the authority of some 40 acts of Parliament. It undertakes work on all phases of agriculture. Research and experimentation are carried out by the research branch and by the animal pathology division of the food production and inspection branch. Research on the quality of cereal grains and oilseeds is done by the grain research laboratory of the Canadian Grain Commission. The commission also administers the Canada Grain Act, as it pertains to the inspection, weighing, storage and transportation of grain.

Inspection and a wide variety of other services to maintain product standards and promote agricultural production are provided by the food production and inspection branch. The food and agricultural marketing branch promotes and expands domestic and foreign markets for Canadian agricultural products. The policy, planning and economics branch provides advisory services in the development of policies and programs. The Prairie Farm Rehabilitation Administration manages soil and water conservation programs in the Prairie provinces. Programs concerning farm income security and price stability are provided under the Crop Insurance Act, the Canadian Dairy Commission Act, the Agricultural Stabilization Act and the Agricultural Products Board Act. The Agricultural Stabilization Board, Agricultural Products Board, Farm Credit Corporation, Canadian Dairy Commission, Canadian Grain Commission, Canadian Livestock Feed Board, National Farm Products Marketing Council and Canadian Agricultural Export Corp. (CANAGREX) report to Parliament through the minister of agriculture.

**Air Canada.** Formerly Trans-Canada Air Lines, Air Canada was incorporated by an act of Parliament in 1937 (RSC 1970, c.A-11) to provide a publicly owned air transportation service, with powers to carry on its business throughout Canada and outside Canada. The corporation maintains passenger, mail and commodity traffic services over nationwide routes and to the United States, Britain, Ireland, Belgium, France, Switzerland, the Federal Republic of Germany, Bermuda, the Bahamas, Jamaica, Antigua, Barbados, the French Antilles, Cuba and Trinidad. Air Canada is responsible to Parliament through the minister of transport.

**Anti-dumping Tribunal (Anti-dumping Tribunal Canada).** Under the Anti-dumping Act (RSC 1970, c.A-15, as amended by SC 1970-71, c.3), the tribunal is a court of record and makes formal inquiry into the impact of dumping on production in Canada. Within 90 days of a preliminary determination of dumping by the deputy minister of national revenue for customs and excise, the tribunal must make an order or finding on the question of material injury, threat of material injury or retardation to production in Canada of like goods. The tribunal may at any time after the date of an order or a finding made by it review, rescind, change, alter or vary the order or finding or may rehear any matter. The Governor-in-Council may ask the tribunal to investigate and report on any matter relative

to importation of goods that may cause or threaten injury to production of goods in Canada.

The tribunal has a chairman, four other members, a secretary, and research and support staff, with offices in Ottawa. The tribunal conducts public and closed hearings, personal interviews, in-house research, statistical and financial analysis, interviews with Canadian manufacturers and associations, and inspection of facilities. It reports to Parliament through the minister of finance.

**Army Benevolent Fund Board.** The board, established by the Army Benevolent Fund Act (SC 1947, c.49, as amended by SC 1974-75-76, c.3), administers the Army Benevolent Fund and other funds, from special accounts set up in the Consolidated Revenue Fund. The board awards grants to veterans or their dependents for relief, if none is available from government sources, contingent on need and continued progress. The board has five members appointed by the Governor-in-Council, one of them nominated by the Royal Canadian Legion and one by the National Council of Veterans Associations in Canada. Head office is in Ottawa. The board reports to Parliament through the minister of veterans affairs.

**Atomic Energy of Canada Ltd.** This Crown company was incorporated in February 1952 under the Atomic Energy Control Act, 1946 (RSC 1970, c.A-19) to take over in April 1952 the operation of the Chalk River project from the National Research Council. The main activities of AECL are the design, development and construction of CANDU nuclear power stations; the construction and operation of heavy water production plants and development of heavy water technology; operation of research and engineering development laboratories; the production and marketing of radioisotopes for medical and industrial uses and the design, manufacture and marketing of equipment using radioisotopes, such as therapy units for the treatment of cancer. The company reports to Parliament through the minister of energy, mines and resources.

**Atomic Energy Control Board.** By act of Parliament (RSC 1970, c.A-19) proclaimed October 1946, the regulation and control of atomic energy in Canada was placed under the Atomic Energy Control Board. The board reports to Parliament through the minister of energy, mines and resources.

**Auditor General, Office of the.** This office originated in 1878 and currently functions under the Auditor General Act (SC 1976-77, c.34) proclaimed as of August 1977. The auditor general is responsible for examining accounts of Canada including those related to the consolidated revenue fund and to public property, and for reporting annually to the House of Commons the results of his examinations. In his report he calls attention to any matter of significance in the management of government departments and agencies that he considers should be brought to the attention of the House of Commons including cases in which he has observed that money has been expended without due regard to economy or efficiency, or satisfactory procedures have not been established to measure and report the effectiveness of programs, where such procedures could appropriately and reasonably be implemented. He also audits the accounts of various Crown corporations and other organizations.

**Bank of Canada.** Legislation of 1934 (RSC 1970, c.B-2) provided for the establishment of a central bank in Canada to regulate credit and currency, to control and protect the external value of the Canadian dollar and to mitigate by its influence fluctuation in the general level of production, trade, prices and employment as far as possible within the scope of monetary action. The Bank of Canada acts as the fiscal agent of the Government of Canada, manages the public debt and has the sole right to issue notes for circulation. It is managed by a board of directors composed of a governor, a deputy governor and 12 directors; the deputy minister of finance is also a member of the board (ex officio). The governor and deputy governor are appointed with the approval of the Governor-in-Council. The directors are appointed by the minister of finance, with the approval of the Governor-in-Council. The bank reports to Parliament through the minister of finance.

**Blue Water Bridge Authority.** Created by the Blue Water Bridge Authority Act (SC 1964, c.6), this non-profit organization is responsible for the operation of the Canadian portion of the bridge spanning the St. Clair River from Point Edward, Ont., to Port Huron, Mich. Tolls set are subject to the approval of the Canadian Transport Commission. All toll moneys must be used for the operation and maintenance of the present bridge or for building a new one. The authority is not an agent of the Crown but its members are appointed by the Governor-in-Council on the recommendation of the minister of transport for terms ranging from one to five years.

**Board of Examiners for Canada Lands Surveyors.** Established under the Canada Lands Survey Act (RSC 1970, c.L-5; amended by SC 1972, c.17, SC 1974-75-76, c.108; and SC 1976-77, c.30), the board examines candidates for commissions as Canada lands surveyors and is responsible for their discipline. The board has five members appointed by the Governor-in-Council, one of whom, the chairman, is the surveyor general of Canada lands; it is part of the energy, mines and resources department.

**Bureau of Pensions Advocates** (Bureau of Pensions Advocates Canada). The bureau was established in 1971 by amendments to the Pension Act (SC 1970-71, c.31). Composed of a chief pensions advocate appointed by the Governor-in-Council, and pensions advocates, officers and employees appointed under the Public Service Employment Act, it provides an independent professional legal aid service to applicants for awards under the Pension Act. The bureau's head office is in Charlottetown, PEI; there are district offices in 18 major centres across Canada. It reports to Parliament through the minister of veterans affairs.

**Canada Council.** The council was established by order-in-council dated April 15, 1957, under the terms of the Canada Council Act (RSC 1970, c.C-2 assented to March 28, 1957). As amended in June 1977, the act provides that the council is to foster and promote the study and enjoyment of, and the production of works in the arts, mainly through a broad program of grants. Its principal sources of income are an annual grant from the government (\$65.5 million for the year ending March 31, 1984) and income from an endowment fund (originally of \$50 million)

which yielded over \$10 million in 1983. The proceedings of the council are reported each year to Parliament through the minister of communications.

**Canada Deposit Insurance Corp.** The corporation was established by legislation (RSC 1970, c.C-3), which received royal assent on February 17, 1967. It is empowered to insure Canadian currency deposits other than those belonging to the Government of Canada, up to \$60,000 a person, in banks, federally incorporated trust and loan companies that accept deposits from the public, and in similar provincially incorporated institutions authorized by their provincial governments to apply for such insurance. The corporation is also empowered to act as a lender of last resort for member institutions. Its board comprises a chairman, appointed by the Governor-in-Council, and four other directors: the governor of the Bank of Canada, deputy minister of finance, superintendent of insurance and inspector general of banks. It reports to Parliament through the minister of finance.

**Canada Development Corp.** The corporation (CDC) was established in 1971 by the Canada Development Corporation Act (SC 1970-71, c.49) to develop and maintain strong Canadian-controlled and managed corporations in the private sector of the economy, to give Canadians greater opportunities to invest and participate in the economic development of Canada, and to operate profitably and in the best interests of all its shareholders. Administration of CDC is vested in a board of 21 directors. CDC is neither an agent of the Crown nor subject to the Financial Administration Act.

CDC concentrates on control-position equity investments in leading corporations in selected industries. Industries characterized by large, longer-range development projects, an upgrading of Canadian resources, a high technological base and a good potential for building a Canadian presence in international markets are considered. Investments have been made in oil and gas, mining, petrochemicals, office information products, life sciences, industrial automation, and venture and expansion capital.

**Canada Employment and Immigration Advisory Council.** This council was established by the Employment and Immigration Reorganization Act — Part II, the Canada Employment and Immigration Advisory Council Act (SC 1976-77, c.54) proclaimed on August 15, 1977. The act provides for a chairman and 15 to 21 other members to be appointed by the Governor-in-Council. The council was established to run parallel to the commission/department of employment and immigration as a distinctive body to provide the minister of employment and immigration with a perspective on all matters to which his powers, duties and functions extend: labour market resources, employment services, unemployment insurance and immigration (including refugee matters).

**Canada Employment and Immigration Commission** (Employment and Immigration Canada). The Employment and Immigration Reorganization Act (SC 1976-77, c.54) passed in August 1977 created the Canada Employment and Immigration Commission by integrating the former Unemployment Insurance Commission and the former manpower and immigration department. The legislation

also created the employment and immigration department which provides services to the commission.

The employment and insurance objective of the commission is to further the attainment of national economic and social goals by realizing the full productive potential of Canada's human resources, while supporting the initiatives of individuals to pursue their economic needs and, more generally, their self-fulfillment through work, and to provide temporary financial assistance to people who are out of work.

The immigration objective of the commission is to administer the admission of immigrants and visitors (non-immigrants) in accordance with the economic, social and cultural interests of Canada.

**Canada Labour Relations Board.** Established under the authority of the Canada Labour Code Part V (RSC 1970, c.L-1), this board administers provisions of the code with respect to workers in industries under federal jurisdiction. It consists of a chairman, a vice-chairman, such additional vice-chairmen not exceeding four, as the Governor-in-Council considers advisable and not less than four or more than eight other members.

**Canada Mortgage and Housing Corp. (CMHC)** is the housing agency of the Government of Canada, charged with the administration of the National Housing Act. It is a Crown corporation with a board of directors appointed by the Governor-in-Council. CMHC is one of the largest financial institutions in Canada with responsibilities to the federal government for the administration of grants, contributions and subsidies, and for the provision of advice to government on housing and related matters. With a national office in Ottawa, CMHC also maintains 80 field offices to work with individuals, businesses, governments and other financial institutions toward improving housing conditions.

The corporation's activities are grouped into three components: government programs, administered funds and asset administration.

In the government programs, CMHC ensures that Canadians have access to mortgage funds; encourages homeowners and owners of rental accommodation to conserve the existing housing stock; and improves access to homeownership and accommodation for low-income households. The corporation is involved in research, development and demonstration, and information regarding housing and related matters.

The administered funds comprise a mortgage insurance fund, a home improvement loan insurance fund and a rental guarantee fund. Premiums and fees paid by borrowers for mortgage loan insurance go into the mortgage insurance fund, and claims are paid for losses if borrowers default. Through mortgage loan insurance, Canadians have benefited from a greater supply of mortgage money and favourable mortgage interest rates.

Asset administration comprises mortgages, real estate and investments as well as services to others. CMHC administers a \$10.3 billion portfolio of mortgages and investments, and 3,359 dwelling units owned by the corporation. Services to others are provided on a user-pay basis; for instance, to government agencies such as Energy, Mines and Resources Canada for the Canadian home

insulation program. CMHC provides expertise in housing-related areas, including fee-for-service inspections and mortgage administration, largely for government departments.

**Canada Museums Construction Corp. Inc.** In June 1982 order-in-council PC 1982-1838 authorized the incorporation of the CMCC as a subsidiary of the Canada Lands Co., to construct new buildings for the National Gallery of Canada and the National Museum of Man. By the terms of the order-in-council, the CMCC was instructed to make recommendations to cabinet on sites, architects, design concepts and a long-term building and funding schedule.

**Canada Ports Corp.** was established by the Canada Ports Corporation Act, proclaimed in February 1983, amending the National Harbours Board Act, the Government Harbours and Piers Act and the Harbour Commissions Act. Ports Canada is a Crown corporation and reports to Parliament through the minister of transport.

Ports Canada is responsible for administration of 15 ports and to ensure they meet the federal responsibility for a national ports policy. It is also responsible for maintenance, upgrading and major expansions to port facilities to provide services to users on a competitive and cost effective basis.

The 1983 legislation gives power to establish local port corporations at any of the Ports Canada ports which meet the criteria of the Canada Ports Corporation Act. In 1983 and 1984 local port corporations were created in Vancouver, Prince Rupert, Montréal, Québec City, and Halifax. Other non-corporate ports are in: St. John's, Nfld.; Saint John and Belledune, NB; Chicoutimi, Baie des Ha! Ha!, Sept-Îles and Trois Rivières, Que.; Prescott and Port Colborne, Ont.; and Churchill, Man.

**Canada Post Corp.** (Canada Post). The corporation has the authority to provide products and services for the transfer of messages, information, funds and goods, including the customary postal services, in Canada and between Canada and other countries. Head office is in Ottawa with divisional offices in Halifax, Québec City, Montréal, Ottawa, Toronto, London, Winnipeg, Edmonton and Vancouver.

**Canadian Advisory Council on the Status of Women.** The council received official status by order-in-council PC 1976-781 in April 1976. It advises the government and informs the public on matters pertaining to the status of women. It recommends changes in legislation and other actions to improve the position of women, and publishes research papers which are available on request.

The council consists of a president and two vice-presidents who are full-time members and 27 part-time members, appointed from each province and territory by the Governor-in-Council for three-year terms. It reports to Parliament through the minister responsible for the status of women.

**Canadian Arsenals Ltd.** (Arsenals Canada). The principal function of this Crown corporation is to operate facilities for the production of certain defence material and other items. It was established under the Companies Act in September 1945, and continued under the Canada Business Corporations Act in October 1980. It is subject to the Government

Companies Operation Act (RSC 1970, c.G-7) and certain provisions of the Financial Administration Act (RSC 1970, c.F-10). It reports to Parliament through the minister of supply and services.

**Canadian Broadcasting Corp.** The CBC is a Crown corporation established by an act of Parliament in 1936, replacing an earlier public broadcasting agency, the Canadian Radio Broadcasting Commission, created in 1932. The Broadcasting Act of 1968 (RSC 1970, c.B-11) describes the CBC as established by Parliament for the purpose of providing the national broadcasting service.

The corporation has a president and 14 other directors appointed by the Governor-in-Council. The president is the chief executive officer. The executive vice-president is appointed by the corporation on the recommendation of the president and with the approval of the Governor-in-Council. He is responsible to the president for the management of broadcasting operations in accordance with corporation policies.

CBC operations are financed by public funds voted annually by Parliament, with supplementary revenue obtained from commercial advertising. The CBC's accounts are audited annually by the auditor general of Canada and the corporation reports to Parliament through the minister of communications.

**Canadian Centre for Occupational Health and Safety.** CCOHS is a federal Crown corporation governed by a tripartite council of governors representing labour, employers and the federal, provincial and territorial governments. It promotes health and safety in Canadian workplaces by gathering, evaluating, and distributing information.

The CCOHS inquiries service provides information on specific occupational health and safety problems posed by workers, employers and governments.

**Canadian Commercial Corp.** By serving as prime contractor in government-to-government export transactions, CCC facilitates the purchase, by other governments, their agencies, and international organizations, of goods and services from Canadian suppliers. Using the specialized services of the export supply directorate and product directorates of the supply and services department, CCC helps client governments and international agencies to find qualified and capable Canadian sources for commercial as well as defence-related products and services.

The corporation also serves as prime contractor in capital projects, when a government-to-government arrangement meets the needs of, and is requested by, the sponsoring foreign government and interested Canadian firms.

A wholly owned Crown corporation, CCC reports to Parliament through the secretary of state for external affairs and the minister for international trade.

**Canadian Dairy Commission.** This commission, which reports to Parliament through the minister of agriculture, was established in December 1966 (RSC 1970, c.C-7) to provide efficient producers of milk and cream the opportunity of obtaining a fair return for labour and investment and at the same time ensure consumers of dairy products a continuous and adequate supply. The commission consists of three members appointed by the

Governor-in-Council and operates with the advice of a nine-member advisory committee appointed by the minister. Since 1970, the commission has chaired a national milk supply management committee, comprised of provincial milk producer marketing boards and provincial government agencies, which manages the market share quota system under the terms of a federal-provincial milk marketing plan.

**Canadian General Standards Board** is a national standards-writing organization accredited by the Standards Council of Canada. CGSB develops voluntary consensus standards through committees representing government, industry, consumer and labour interests and technical or research organizations. Besides publishing a catalogue of standards and qualified products lists, CGSB also publishes a catalogue of standards applicable to the national master specification for building construction. As well, CGSB manages a qualification and certification listing program through which contractors and suppliers who have demonstrated their ability to conform to established standards are listed.

**Canadian Grain Commission.** The Canada Grain Act (SC 1970-71, c.7) came into force in April 1971, repealing the Canada Grain Act, 1930 (RSC 1952, c.25) and creating this commission to replace the former Board of Grain Commissioners for Canada. It provides general supervision over the physical handling of grain in Canada by licensing elevators and elevator operators, by inspecting, grading and weighing grain received at and shipped from terminal elevators, and by other services associated with regulating the grain industry. It administers the Grain Futures Act, which provides for grain futures trading.

The commission consists of a chief commissioner and two commissioners. Its objects are, in the interests of grain producers, to establish and maintain standards of quality for Canadian grain, to ensure a dependable commodity for domestic and export markets and to regulate grain handling in Canada. It has authority to conduct investigations and hold hearings, and to undertake, sponsor and promote research in relation to grain and grain products. The commission reports to Parliament through the minister of agriculture.

**Canadian Human Rights Commission.** Established in July 1977 by the Canadian Human Rights Act (SC 1976-77, c.33), this commission deals with complaints of discrimination in employment and in the provision of goods, services and accommodation in areas under federal jurisdiction such as federal government departments and agencies, Crown corporations, banks, airline and railway companies.

Amended in July 1983, the act now bans discrimination on 10 grounds: race, national or ethnic origin, colour, religion, age, sex, marital status, family status, pardoned offence and disability. As part of its mandate, the commission also develops and conducts information programs to foster public understanding of the act.

The commission head office is in Ottawa. It has regional offices in Halifax, Montréal, Toronto, Winnipeg, Edmonton and Vancouver.

**Canadian International Development Agency.** CIDA carries out most of Canada's official international devel-

opment program. Originally established by order-in-council PC 1960-1476 and known until 1968 as the External Aid Office, the agency is under the direction of a president and reports to Parliament through the secretary of state for external affairs.

**Canadian International Development Board.** The board is a high-ranking interdepartmental committee that assists the president of the Canadian International Development Agency (CIDA) in preparing recommendations on aid programs to the secretary of state for external affairs. It is made up of the under-secretary of state for external affairs, the deputy ministers of the departments of agriculture, finance and industry, trade and commerce, the governor of the Bank of Canada, the secretary of the treasury, the clerk of the Privy Council office and the president of the International Development Research Centre. It meets under the chairmanship of CIDA's president.

**Canadian Livestock Feed Board** (Livestock Feed Board of Canada). This board is a Crown corporation reporting to Parliament through the minister of agriculture. Established under the Livestock Feed Assistance Act in 1966, its objectives are to ensure the availability of feed grain in Eastern Canada, British Columbia, Yukon and Northwest Territories, adequate storage space in Eastern Canada, and reasonable stability and fair equalization of feed grain prices in Eastern Canada, in British Columbia, Yukon and Northwest Territories. The board administers the feed freight assistance program which subsidizes a portion of the transportation costs for movement of eligible feed grains and products for use by livestock feeders in some feed grain deficit areas. The act stipulates that the board must make a continuing study of feed grain requirements and availability and must study and make recommendations to the minister on requirements for additional feed grain storage facilities in Eastern Canada. The board must advise the government on all matters pertaining to stabilization and fair equalization of feed grain prices to livestock feeders and, to the greatest extent possible, to consult and co-operate with all federal departments, branches or other agencies or any province with similar duties, aims or objects.

The board has been assigned responsibilities under the national feed grain policy, effective since August 1974. It examines selling practices east of Thunder Bay and monitors the domestic market outside the designated region of the Canadian Wheat Board. The Livestock Feed Assistance Act stipulates that the board may buy, transport, store and sell feed grains in Eastern Canada and British Columbia when authorized to do so by the Governor-in-Council.

The board is composed of three to five members with headquarters in Montréal and a branch office in Vancouver. A seven-member advisory committee, appointed by the Governor-in-Council, and representing livestock feeders in Eastern Canada and British Columbia, meets periodically with the board to review and discuss all aspects of feed grain supplies and prices, and related policies. This committee may make recommendations to the minister and the board.

**Canadian National Railways.** The Canadian National Railway Co. was incorporated to administer an undertaking made up mainly of railway and other service facilities and

activities. It includes the assets of the former Grand Trunk Railway Co. of Canada and its subsidiaries, and of the Canadian Northern System, as well as certain Crown-owned properties which Canadian National manages and operates.

Primary statutes governing its organization and operation are the Canadian National Railways Act (RSC 1970, c.C-10) and the Railway Act (RSC 1970, c.R-2). Direction and control of the company and its undertaking are vested in a board of directors; its principal officers are the chairman of the board and the president, who is the chief executive officer.

**Canadian Patents and Development Ltd.** is a Crown corporation established in 1947 to assess, patent and license the industrial and intellectual property arising out of research conducted in the laboratories of the federal government, provincial institutes and universities.

The government, through the Public Servants Act in 1954, made CPDL the prime agency for exploiting public servants' inventions which by that act belong to the Crown. CPDL also exploits industrial and intellectual property resulting in the private sector from certain government-financed research and development. Revenue received from CPDL commercial activities is used to defray CPDL operating expenses.

The board of directors consists of individuals from industry, universities, provincial institutes and the federal government. The head office is in Ottawa. CPDL reports to Parliament through the minister of regional industrial expansion.

**Canadian Penitentiary Service** (Correctional Service Canada). This service (formerly the Canadian Penitentiary Service and the National Parole Service) operates under the Penitentiary Act (RSC 1970, c.P-6 and amendments thereto and SC 1976-77, c.53) and the National Parole Act and is under the jurisdiction of the solicitor general of Canada. It is responsible for all federal penitentiaries, for the care and training of persons committed to these institutions and for the supervision and assistance given to inmates released from those institutions under various types of release such as temporary absences, mandatory supervision and parole. The commissioner of corrections, under the direction of the solicitor general, has control and management of the service and all matters connected with it.

**Canadian Pension Commission.** This commission, established in 1933 by amendments to the Pension Act (RSC 1970, c.P-7), replaced the Board of Pension Commissioners, the first organization created to deal solely with war pensions for service in Canada's armed forces. The commission's main function is administration of the Pension Act under which it adjudicates on all claims for pensions in respect of disability or death arising out of service in Canada's armed forces; and parts of the Civilian War Pensions and Allowances Act, which provide for payment of pensions in respect of death or disability arising out of civilian service directly related to the prosecution of World War II. It also adjudicates on claims for compensation as a result of having been a prisoner of war and for pension in respect of disability or death arising out of RCMP service and under various other measures. It authorizes and pays monetary grants accompanying certain gallantry awards

bestowed on members of the armed forces and administers various trust funds established by private individuals for the benefit of veterans and their dependents. The commission consists of eight to 14 commissioners and up to 10 ad hoc commissioners appointed by the Governor-in-Council. Its chairman has the rank of a deputy minister and it reports to Parliament through the minister of veterans affairs.

**Canadian Permanent Committee on Geographical Names** (Geographical Names). This committee deals with all questions of geographical nomenclature affecting Canada and advises on research and investigation into the origin and use of geographical names. Its membership includes representatives of federal mapping agencies and other federal offices concerned with nomenclature and a representative appointed by each province. The committee's functions were redefined in 1969 (order-in-council PC 1969-1458). The order-in-council recognizes that the provinces have exclusive jurisdiction to make decisions on names in lands under their jurisdiction. The committee is administered by the energy, mines and resources department.

**Canadian Radio-television and Telecommunications Commission.** This commission, established as the Canadian Radio-Television Commission under the provisions of the Broadcasting Act (RSC 1970, c.B-11), regulates and supervises all aspects of the Canadian broadcasting system. The Canadian Radio-television and Telecommunications Commission Act, promulgated in April 1976, amended the Broadcasting Act to assign regulatory responsibility to the Canadian Radio-television and Telecommunications Commission (CRTC) over federally regulated telecommunications carriers.

CRTC regulates and supervises a single Canadian broadcasting system, mainly through the process of licensing broadcasting undertakings and administering a body of regulation and policy statements to implement the policies set out in the Broadcasting Act.

One of the commission's methods of satisfying concerns set out in the Railway Act is to hold public hearings in connection with applications for general rate revisions submitted by the telecommunications carriers under its jurisdiction.

The CRTC consists of an executive committee of up to nine full-time members composed of a chairman, two vice-chairmen and six other full-time members. The full commission includes the executive committee and up to 10 part-time members chosen regionally. All are appointed by the Governor-in-Council. The commission reports to Parliament through the minister of communications.

**Canadian Saltfish Corp.** Established under the Saltfish Act (SC 1969-70, c.32) and operative since May 1970, this corporation's main purpose is to improve the earnings of fishermen and other primary producers of salt-cured fish, through production or purchase, processing and marketing of salt cod from participating provinces.

The head office is at St. John's, Nfld. The board of directors is composed of a chairman, a president who is chief executive officer, one director for each participating province and not more than five other directors, all appointed by the Governor-in-Council. It is assisted by an

advisory committee of 15 members, at least half of them fishermen or representatives of fishermen. The corporation is required to operate without grant appropriation from Parliament and is financed by bank loans with government guarantee of repayment or by direct loans. It reports to Parliament through the minister of fisheries and oceans.

**Canadian Transport Commission.** The commission, a court of record created in 1967 by the National Transportation Act (RSC 1970, c.N-17), took over powers formerly vested in the Board of Transport Commissioners, the Air Transport Board and the Canadian Maritime Commission. A western division of the commission was established at Saskatoon, Sask. in 1979. Four committees regulate the different transport modes — air, rail, water and commodity pipeline. Regulation of extra-provincial motor vehicle transport is in effect only for the Roadcruiser bus service operated by the Canadian National Railways in Newfoundland. In July 1976 the CN bus service was exempted by the Governor-in-Council from provisions of the Motor Vehicle Transport Act (RSC 1970, c.M-14), and came under the jurisdiction of the motor vehicle transport committee of the Canadian Transport Commission, pursuant to the National Transportation Act. Regulatory control over all other extra-provincial motor vehicle undertakings is exercised by provincial highway transport boards, acting as agents of the federal government, as provided for in the Motor Vehicle Transport Act. A sixth committee deals with review and appeals, while the seventh is concerned with international transport policy. A research branch studies the economic aspects of all modes of transport within, into or from Canada, and a traffic and tariff branch ensures that all tariffs and tolls issued by federally regulated railways, railway express companies, water carriers, motor vehicle undertakings and international bridge and tunnel companies are compiled, issued and filed as required by the Railway Act, the Transport Act, the National Transportation Act and regulations of the commission. The commission also administers statutory subsidy payments to the railways for protected and unprotected branch lines, and passenger train services. It establishes rates for the movement of grain under the Western Grain Transportation Act.

The commission consists of not more than 17 members, including a president and two vice-presidents, appointed by the Governor-in-Council for a maximum of 10 years. It reports to Parliament through the minister of transport.

**Canadian Wheat Board.** The board was incorporated in 1935 under the Canadian Wheat Board Act (RSC 1970, c.C-12) to market, in the interprovincial and export trade, grain grown in Canada. Its powers include authority to buy, take delivery of, store, transfer, sell, ship or otherwise dispose of grain. Except as directed by the Governor-in-Council, the board was not originally authorized to buy grain other than wheat but since August 1949 it has also been authorized to buy barley and oats. Only grain produced in the designated area, Manitoba, Saskatchewan, Alberta and parts of British Columbia, is purchased by the board, which controls the delivery of grain into elevators and railway cars in that area as well as the interprovincial movement for export of wheat, oats and barley generally. The board reports to Parliament each year through a designated minister.

**Canagrex** is a Canadian agricultural export corporation established by an act of Parliament in June 1983 (SC 1980-81-82-83, c.152). Canagrex has a board of directors, all Canadian citizens, including a president appointed by the Governor-in-Council, a chairman, vice-chairman and eight other members. Seven of the directors are appointed from outside the public service of Canada and three are appointed from government departments, one each being from the departments of agriculture, finance and external affairs (international trade).

**Cape Breton Development Corp.** This proprietary Crown corporation was created by an act of Parliament in July 1967 (RSC 1970, c.C-13) and came into existence by proclamation in October 1967. It was set up to rationalize the coal industry of Nova Scotia's Cape Breton Island and to broaden the base of the area's economy by assisting financing and development of industry to provide employment outside the coal mines.

The corporation acquired former interests of the major coal producer in the Sydney coalfield and is operating three mines, a modern coal preparation plant and other ancillaries. It is active in development of tourism, primary products and secondary industries.

The act provides for a board of directors, comprising a chairman, a president and five other directors. Head office is in Sydney. The corporation reports to Parliament through the minister of regional economic expansion. Its operations are financed by the federal government.

**Chief Electoral Officer, Office of the.** This office was established in 1920 under provisions of the Dominion Elections Act, now the Canada Elections Act (RSC 1970, c.14, 1st Supp.) as amended. Previously the Dominion Elections Act, 1874 (SC 1874, c.9) assigned to the clerk of the Crown in chancery certain of the duties now carried out by the chief electoral officer. The chief electoral officer is an officer of Parliament, appointed by resolution of the House of Commons. He ranks as and has all the powers of a deputy head of a department. The chief electoral officer communicates with the Governor-in-Council through the president of the Privy Council, pursuant to subsection 3(3) of the Canada Elections Act.

The objectives of the office are to enable Canadians who are eligible to vote to elect members to the House of Commons, and to ensure compliance with the election expenses provisions of the act. The act was amended (SC 1977-78, c.8) to provide for the chief electoral officer to conduct, with the agreement of the commissioner of Yukon or Northwest Territories, the election of members to the respective council pursuant to the applicable territory election ordinance.

The office administers the Ottawa headquarters, reviews and studies electoral procedures and election expenses provisions, and prepares statutory and statistical reports and instruction books for election officers, candidates and political parties.

The office exercises general direction and supervision over the administrative conduct of elections: training federal and territorial returning officers, revising boundaries of polling divisions, acquiring election material and supplies for returning officers, and making statutory payments to

auditors, political parties and candidates where specified by the act.

Since 1979, the chief electoral officer is responsible for providing the 11 electoral boundaries commissions with the number of members of the House of Commons attributed to each province, pursuant to a formula prescribed by the Constitution Act. He must supply each of these commissions, established under the Electoral Boundaries Readjustment Act (one for each province and one for Northwest Territories), with a copy of the official statement received from the Chief Statistician of Canada setting out the population based on the last decennial census and prepare maps showing the population distribution in each province.

#### **Columbia River Treaty Permanent Engineering Board.**

The permanent engineering board, consisting of two Canadians and two Americans, was established under the 1964 Columbia River Treaty between Canada and the United States. The board assembles records and inspects and reports at least annually on matters within the scope of the treaty. It reports to Parliament through the minister of energy, mines and resources.

**Commissioner of Official Languages.** Appointed by Parliament pursuant to the Official Languages Act (RSC 1970, c.O-2), the commissioner holds office for a term of seven years, and is eligible to be re-appointed for a further term not exceeding seven years. He is responsible to Parliament for ensuring recognition of the equal status of French and English as Canada's official languages and for ensuring compliance with the spirit and intent of the act in all the institutions of the Parliament and Government of Canada. The commissioner is empowered to receive and investigate complaints from the public and, on his own initiative, to conduct investigations into possible violations of the act. The results of investigations must be communicated to the complainants and the institutions concerned and may, at the commissioner's discretion, be the subject of a special report to Parliament. The commissioner reports annually to Parliament on the conduct of his office and the discharge of his duties, and may make recommendations for changes in the act as he deems necessary or desirable.

**Communications, Department of** (Communications Canada). The department was established under the 1969 Government Organization Act and operates under authority of the Department of Communications Act (RSC 1970, c.C-24). The minister of communications is responsible for fostering the orderly operation and development of communications for Canada. This includes recommending national policies and programs regarding communications services for Canada, promoting the efficiency and growth of Canadian communications systems and helping them adjust to changing conditions, and encouraging development and introduction of new communication facilities and resources. Responsibilities also include managing the radio frequency spectrum to permit orderly use of radio communications, protecting Canadian interests in international telecommunications matters, and co-ordinating telecommunications services for departments and agencies of the federal government.

Telelobe Canada, the Canadian Radio-television and Telecommunications Commission and Telesat Canada

report to Parliament through the minister of communications.

The department also has a mandate to ensure that new technologies serve the nation's social, economic, artistic and cultural needs, through programs and services such as a program of cultural initiatives and a Canadian book publishing development program.

**Consumer and Corporate Affairs, Department of** (Consumer and Corporate Affairs Canada). This department was established in 1967 (RSC 1970, c.C-27) replacing the Department of the Registrar General of Canada. The duties, powers and functions of the minister extend to and include all matters over which Parliament has jurisdiction, not by law assigned to any other department, branch or agency of the federal government, relating to: consumer affairs; corporations and corporate securities; combines, mergers, monopolies and restraint of trade; bankruptcies and insolvencies; and patents, copyrights, trade marks and industrial design.

The functions of the department are divided into three main areas. The consumer affairs bureau co-ordinates government activities in the consumer field and supervises the department's field operations across Canada; the corporate affairs bureau administers the government's corporate activities, laws and regulations, including those pertaining to patents, trade marks, industrial design and copyright; competition policy is regulated by the competition policy bureau. As registrar general of Canada, the minister of consumer and corporate affairs is the custodian of the Great Seal of Canada, the Privy Seal of the Governor General, the seal of the administrator of Canada and the seal of the registrar general of Canada. The Restrictive Trade Practices Commission (Combines Investigation Act) is part of the department and reports directly to the minister.

**Copyright Appeal Board** (Copyright Appeal Board Canada). The board approves fees, charges and royalties to be collected annually by performing rights societies for the use of their members' music in Canada. The Copyright Act (RSC 1970, c.C-30) empowers the board to consider statements of proposed fees and any objections filed by those using the music. Only the amount of the fees may be considered; the board has no authority to set terms and conditions. Public hearings are held to consider objections to proposals. Decisions of the board are final and binding and are transmitted to the minister of consumer and corporate affairs for publication in the *Canada Gazette*. The board consists of three members appointed by the Governor-in-Council; the chairman must hold or have held high judicial office, the other two members must be public servants of Canada.

**Correctional Investigator** (Correctional Investigator Canada). Appointed by order-in-council PC 1973-1431 in June 1973 as a commissioner under Part II of the Inquiries Act, the correctional investigator has the power to investigate on his own initiative, on request from the solicitor general of Canada, or on complaint from or on behalf of inmates, as defined in the Penitentiary Act, and report upon problems of inmates that come within the responsibility of the solicitor general. The office is in Ottawa and is independent of the Correctional Service of Canada.

**Court Martial Appeal Court.** This court was established as a superior court of record under the National Defence Act (RSC 1970, c.N-4). Accused persons found guilty by a court martial have the right to direct an appeal to the Court Martial Appeal Court on the legality of any or all findings, or on the legality of the whole or any part of the sentence. The court is composed of not fewer than four judges of the Federal Court of Canada and additional judges of a superior court of criminal jurisdiction as designated by the Governor-in-Council, with one judge appointed as president. Appeals are heard by a minimum of three judges. The Court Martial Appeal Court may sit and hear appeals at any place under direction of the president. An appellant whose appeal has been wholly or partially dismissed by the court may, under certain circumstances, appeal to the Supreme Court of Canada; where the Court Martial Appeal Court has wholly or partially allowed an appeal, the minister of national defence may similarly enter an appeal to the Supreme Court of Canada.

**Crown Assets Disposal Corp.** This agency corporation was established in 1944 as the War Assets Corp. under the Surplus Crown Assets Act (RSC 1970, c.S-20). Its name was changed to Crown Assets Disposal Corp. in 1949. The corporation is solely responsible for the sale of federal government surplus movable assets located in Canada and at Canadian government establishments throughout the world. It also acts as agent on behalf of foreign governments in selling their surplus property located in Canada and has an agreement with a European agency for marketing certain Canadian military surplus assets located abroad. While the corporation's normal method of sale is to invite written offers, on occasion it sells by public auction and through retail outlets. The act provides for a board of directors, comprising a chairman and a minimum of five other directors. The disposal functions are carried out by the disposal operations services of Supply and Services Canada, on behalf of the corporation. Its head office is in Hull, Que. and there are seven regional offices in Dartmouth, Montréal, Toronto, Ottawa, Winnipeg, Edmonton and Richmond. The corporation is responsible to Parliament through the minister of supply and services.

**Defence Construction (1951) Ltd.** This Crown corporation contracts for major construction and maintenance projects required by the defence department. It was incorporated in May 1951 under the authority of the Defence Production Act. In April 1965 its control and supervision were transferred from the minister of defence production to the minister of national defence.

Defence Construction (1951) Ltd. (DCL) obtains tenders, makes recommendations regarding awards, and awards and administers major construction and maintenance contracts. This includes supervision of construction work and the certification of progress claims for completed work.

The company provides technical and administrative assistance to government departments and agencies. Head office is in Ottawa and branch offices are in Halifax, Montréal, Toronto, Winnipeg, Vancouver and Lahr, Federal Republic of Germany.

**Director of Soldier Settlement and Director of the Veterans' Land Act.** The director of soldier settlement

(SC 1919, c.71) is also director of the Veterans' Land Act (RSC 1970, c.V-4), and in each capacity is legally a corporation sole. For administrative purposes the programs carried on under both acts constitute integral parts of the services provided by the veterans affairs department.

**Economic Council of Canada.** This corporation, established under legislation passed in August 1963 (RSC 1970, c.E-1), consists of a full-time chairman and two full-time directors appointed for a term not to exceed seven years, and not more than 25 additional members to serve part time and without remuneration. The council is to be as representative as possible of the private sector across the country, labour, agriculture, primary industry, secondary industry, commerce and the general public. Its functions are to study economic developments and recommend measures to achieve the highest possible levels of employment and efficient production and to reduce regional disparities. The council reports to Parliament through the prime minister and publishes various reports and studies.

**Economic and Regional Development, Ministry of State for.** (On June 30, 1984 the prime minister announced that this ministry would be discontinued.)

**Eldor Resources Ltd.** This company is a wholly owned subsidiary of Eldorado Nuclear Ltd. It was incorporated in 1978 to purchase an interest in the Key Lake, Sask. uranium ore deposits and related properties, and to co-develop a mine and mill, completed in late 1983. As part of a reorganization in 1982, Eldor also holds most of the Eldorado group's exploration interests.

**Eldorado Nuclear Ltd.** Purchased from private shareholders in 1942 and 1944 (RSC 1952, c.53) the company was renamed Eldorado Mining and Refining (1944) Ltd. The date was omitted in 1952 and the current name adopted in 1968. The company is engaged in uranium exploration, mining and processing, selling its products and services to electric utilities in Canada and around the world. In January 1983 the federal government transferred the company's shares to the Canada Development Investment Corp. Eldorado reports to Parliament through CDIC.

**Eldorado Resources Ltd.** This company is a wholly owned subsidiary of Eldorado Nuclear Ltd. Under a reorganization in 1982, all of the parent company's operating units were transferred to this subsidiary, which now includes three divisions — Eldor Mines which operates the Rabbit Lake, Sask. uranium mining properties and a mill; fuel services which processes uranium at the refinery in Blind River, Ont. and conversion plants in Port Hope, Ont.; and specialty metals, which produces uranium and other metal alloys, also at Port Hope. Research and development and all administrative support for the Eldorado group are also under Eldorado Resources.

**Employment and Immigration, Department of (Employment and Immigration Canada).** This department was established in 1977 to provide services to the Canada Employment and Immigration Commission.

**Energy, Mines and Resources, Department of (Energy, Mines and Resources Canada).** The department was created in 1966 by the Government Organization Act

(RSC 1970, c.E-6). It is organized into three sectors. The energy sector has responsibilities relating to the development of plans and policies for all forms of energy, including renewable energy sources and energy conservation, the development of programs, legislation and agreements to implement those policies, the direction of studies relating to energy sources and requirements, provision of in-depth economic analysis, and the co-ordination of policy advice. A major responsibility of the sector is research on and formulation of a national energy policy. The mineral policy sector gathers economic data on non-renewable resources for use by government, industry and the public. It develops policy proposals for the government and the mineral industry to ensure a dependable flow of minerals to meet the country's needs at reasonable cost. The science and technology sector includes a geological survey of Canada, a Canada centre for mineral and energy technology (CANMET), a surveys and mapping branch, an earth physics branch, a Canada centre for remote sensing and the polar continental shelf project, all engaged in research and the provision of information; an office of energy research and development which co-ordinates federal R&D related to energy policies; an explosives branch which controls, under provisions of the Explosives Act, the production and handling of explosives; and the Canada centre for geoscience data.

Atomic Energy of Canada Ltd., Eldorado Nuclear Ltd., Eldorado Aviation Ltd., the Atomic Energy Control Board, the National Energy Board, Uranium Canada Ltd., Petro-Canada, the Energy Supplies Allocation Board and the interprovincial boundary commissions report to Parliament through the minister of energy, mines and resources. Administrative support for the International Boundary Commission is provided by the department; in reporting to Parliament and dealing with its counterpart in the United States the commission is responsible to the secretary of state for external affairs.

**Environment, Department of the** (Environment Canada). Established by an act of Parliament in 1979, the environment department carries the main federal responsibility of combating pollution and ensuring proper management and development of Canada's renewable resources.

An atmospheric environment service (AES) acquires, processes and provides information on climatological, meteorological and ice data. AES maintains a national communications system to provide current and forecast weather and ice information to the general public, aviation, marine, agriculture and other special users. It also carries out research into atmospheric conditions and processes, air quality, and in support of weather observing and forecast systems. AES represents Canada in the international meteorological community.

An environmental protection service (EPS) ensures that the federal government's responsibilities for environmental protection are carried out and, where necessary, enforced under appropriate legislation. EPS is the focal point for contact and liaison with provincial agencies and with industry on environmental protection. It is also a point of contact with other federal departments and agencies and the public. EPS develops environmental regulations, codes,

protocol, and other protection and control instruments to implement governmental legislation. The service is concerned with air and water pollution, waste management including resource recovery, environmental contaminants, environmental impact assessment and control and environmental emergencies.

Responsibility for environmental control is shared by federal, provincial and municipal governments. EPS co-operates with provincial and territorial governments to which in some instances responsibilities are delegated.

An environmental conservation service (ECS) conserves and enhances Canada's renewable resources of water, wildlife, lands and their related ecosystems and promotes their use in a sustainable manner for the economic and social benefit of present and future generations. The ECS contributes to research on renewable resource management, flood damage reduction, land-use monitoring, migratory bird conservation, measuring toxic chemicals entering the environment, identifying the impacts of the long range transport of airborne pollutants, and environmental assessments and baseline studies in support of the federal environmental assessment and review process.

The Canadian Forestry Service provides scientific and technological leadership in the forest industry through six regional centres and two national institutes, encourages economic development of Canada's forests on sound environmental principles, co-operates in federal-provincial research and renewal projects, and maintains links with forestry organizations in other countries.

The department co-ordinates the government's relationships in environmental and resources matters with the provinces and with other countries. Advice to the minister is provided by an environmental advisory council and a separate forestry advisory council which includes representatives from industry, universities and the scientific community.

**Export Development Corp.** EDC operates under authority of the Export Development Act (RSC 1970, c.E-18, as amended). A Crown corporation, it provides a wide range of insurance and bank guarantee services to Canadian exporters and arranges credit for foreign buyers to facilitate and develop export trade. EDC reports to Parliament through the minister for international trade, as delegated by the minister of external affairs. Its affairs are administered by a 15-member board of directors chaired by the corporation's president. The board consists of senior representatives of the public and private sectors. Principal services are: export credits insurance, to insure Canadian exporters of goods and services against non-payment by foreign buyers due to credit or political events over which neither buyer nor seller has any control; a package for performance-related insurance which protects exporters against wrongful calls of bid and performance bonds; foreign investment insurance which protects investors against expropriation, inability to repatriate earnings, and war and revolution; and export financing, which provides buyers of Canadian capital goods with medium- or long-term financing. EDC may also guarantee financial institutions against loss when they provide supplier or buyer credits, or performance-related securities, in support of an export transaction. Regional offices are in Vancouver, Toronto, Montréal and Halifax.

**External Affairs, Department of** (External Affairs Canada). The main functions of the department, established in 1909, are management of Canada's foreign relations and the promotion of Canada's export trade in Canada and abroad. The responsible ministers are the secretary of state for external affairs, the minister, international trade and the minister, external relations. The senior permanent officer (deputy minister) of the department, the under-secretary of state for external affairs, is assisted by two deputy ministers and by 12 assistant deputy ministers and they are advised by officers in charge of bureaus, divisions, and special or single-purpose units. Directors general or directors of these units are assisted by foreign service officers and trade officers, specialists in various occupational groups and an administrative staff. Officers serving abroad are formally designated as high commissioner, ambassador, minister, minister-counsellor, counsellor, first secretary, second secretary, third secretary and attaché at diplomatic posts, and consul general, consul and vice-consul at consular posts. Trade commissioners are located at over 90 posts in 67 countries. Canada has diplomatic relations with 140 countries. (See Appendix 5 for locations.)

In Ottawa the department's work is conducted by regional, functional and administrative branches and operational bureaus and divisions. The five regional branches administer 13 geographical divisions, each responsible for the countries of a region. Eleven functional bureaus, comprised of 29 divisions, are concerned with energy, trade and general economic relations; consular services; co-ordination; defence and arms control; development, industry and science relations; legal affairs; international cultural relations; information; intelligence analysis and security; economic intelligence; and United Nations affairs. Four administrative bureaus are responsible for personnel, finance and management services, communications and general services, and physical resources.

In addition, there is a secretariat for an interdepartmental committee on external relations, an interdepartmental inspection service, a chief of protocol, an operations centre, a chief air negotiator, passport offices in Ottawa and Hull, seven regional passport offices, a press office, an information service, a library, an adviser on disarmament and arms control, an economic adviser, an adviser on conflict of interest and on international appointments, a co-ordinator and ambassador-at-large for the conference on security and co-operation in Europe (CSCE) and a senior management secretariat.

The International Joint Commission reports to the secretary of state for external affairs of Canada as well as to the secretary of state of the United States. The secretary of state for external affairs reports to Parliament for the Canadian International Development Agency.

**Farm Credit Corp.** (Farm Credit Corp. Canada). This Crown corporation, established in 1959 (RSC 1970, c.F-2) is responsible to Parliament through the minister of agriculture. Under the Farm Credit Act it makes long-term mortgage loans to farmers. It also administers the Farm Syndicates Credit Act.

**Federal Business Development Bank (FBDB).** The bank was established by an act of Parliament in 1974 (SC 1974-75-76, c.14) as a federal Crown corporation to

succeed the Industrial Development Bank. Under the act FBDB assists in establishing and developing business enterprises in Canada by providing financial services in term loans and investments and by supplementing services available from other sources. It also provides management services of counselling, training and information. The bank gives particular attention to the needs of small and medium-sized enterprises.

The board of directors consists of a president, four persons from the public service, and 10 persons from outside the public service. The bank's authorized capital is \$200 million, but it may raise additional funds by the issue and sale of debt obligations, provided that the total of the bank's direct and contingent liabilities shall not exceed 10 times its capital.

**Federal Environmental Assessment Review Office.** Following a cabinet decision in December 1973 (adjusted in February 1977), this office was formed to establish an environmental assessment and review process. All government departments and agencies are subject to the process, except proprietary Crown corporations and regulatory agencies which are invited to participate.

The process requires participating federal agencies to screen their projects, programs and activities for potentially adverse environmental effects, and refer those which may have significant impact to the review office for formal review. The office is directed by an executive chairman who reports to the minister of the environment.

In undertaking its review, each environmental assessment panel issues guidelines for use by the project proponent in preparing an environmental impact statement. Public response to this document is obtained through hearings where technical organizations, interest groups, and individual citizens are encouraged to present their views. After the panel has reviewed all the information, a report is prepared for the minister. The report contains conclusions and recommendations concerning project implementation. Decisions on the recommendations are made by the minister of the environment and the minister responsible for the project.

**Federal-Provincial Relations Office.** The office came into being in January 1975 by an act respecting the office of the secretary to the cabinet for federal-provincial relations and respecting the clerk of the Privy Council. For some years prior to the creation of the office, its functions had been carried out by a federal-provincial relations secretariat in the Privy Council office. The office is headed by the secretary to cabinet for federal-provincial relations who reports directly to the prime minister.

The office assists the prime minister in his overall responsibility for federal-provincial relations; assists the cabinet in examining federal-provincial issues of current and long-term concern and promotes and facilitates federal-provincial consultation. The FPRO also provides assistance to federal ministers, departments and agencies in the conduct of their relations with provincial governments.

**Finance, Department of.** Created by an act of Parliament in 1869, this department now operates under the Financial Administration Act (RSC 1970, c.F-10 as amended). It is primarily responsible for advising the government on the

economic and financial affairs of Canada. The department's work is carried out in five branches. A fiscal policy and economic analysis branch is responsible for planning fiscal policy, analysis of its effects on the economy, and analyzing and forecasting the financial requirements of the federal government. A tax policy and legislation branch analyzes and makes recommendations relating to tax policy and maintains a tax system that raises revenues and targets incentives to meet the government's goals. A federal-provincial relations and social policy branch makes policies for and administers major federal-provincial programs under which transfer payments are made to provinces, and is responsible for policy advice on social programs in the manpower, employment and cultural areas. An international trade and finance branch investigates and reports on proposals regarding the Canadian Customs Tariff and related matters; studies Canada's international trade policy, particularly as it relates to imports; advises on balance of payments and foreign exchange matters; deals with questions relating to the international monetary system; and administers Canada's relations with international monetary and financial institutions. An economic programs and government finance branch encourages the development of policies and programs for Canadian national resources. The inspector general of banks is an office of the department.

The following agencies report to Parliament through the minister of finance: the Anti-dumping Tribunal, the Bank of Canada, the Canada Deposit Insurance Corp., the Department of Insurance and the Tariff Board. The minister of finance acts as spokesman in Parliament for the auditor general.

**Fisheries and Oceans, Department of.** Established as a separate entity in April 1979 under the authority of the Government Organization Act, 1978, the fisheries and oceans department has overall responsibility for Canada's coastal and inland fisheries, fishing and recreational harbours, hydrography and marine sciences and the co-ordination of the federal government's policies and programs in respect to the oceans.

Departmental programs are concerned with fisheries and marine mammal resource management and conservation, enforcement of fisheries regulations, industrial development, fish inspection and quality control, marketing and promotion of fish products, biological and technical research on fish and other aquatic flora and fauna, fishing vessel insurance and vessel construction assistance administration, management and development of small craft harbours across Canada, studies on the management of recreational fisheries, and administration of international and federal-provincial fisheries agreements.

In the area of ocean and aquatic sciences, the department is responsible for physical, chemical and biological oceanography and limnology research aimed at gaining a better understanding of marine and freshwater environments. Other responsibilities include hydrographic surveying, measurement of tide and water levels and production of navigational, bathymetric and other charts of Canadian coastal and inland waters. Oceanographic information is acquired and disseminated through the marine environmental data service.

**Fisheries Prices Support Board.** Under the Fisheries Prices Support Act (RSC 1970, c.F-23) the board is responsible for investigating and, where appropriate, recommending action to support prices of fishery products where declines have occurred. Subject to approval of the cabinet, it is empowered to purchase fishery products at prescribed prices or to make deficiency payments to producers of fishery products equal to the difference between a prescribed price and the average price at which such products were sold. The board functions under the direction of the minister of fisheries and oceans.

**Foreign Claims Commission.** This commission was established under the Inquiries Act. When Canada makes an agreement with another country for a global settlement of property claims of Canadian citizens against that other country, the claims may be referred to the commission for recommendations as to which claimants are entitled to compensation. The procedure for making recommendations is governed by regulations made in respect of each other country. When negotiation of an agreement is in contemplation the secretary of state for external affairs may refer all claims of which the Canadian government has notice to the commission for a preliminary estimate. Claims against Hungary, Romania and Poland have been dealt with by the commission as have most claims against Czechoslovakia, Cuba and China. Claims against Yugoslavia and the German Democratic Republic have been referred to the commission for preliminary appraisal in contemplation of agreements with those countries.

**Foreign Investment Review Agency.** The agency was established in April 1974 by proclamation of the Foreign Investment Review Act (SC 1973-74, c.46). It assesses whether there is or will be significant benefit to Canada in proposals by non-Canadians regarding acquisition of control of Canadian business enterprises or establishment of new businesses in Canada. The agency is responsible to the minister of regional industrial expansion.

**Freshwater Fish Marketing Corp.** This corporation was established under the Freshwater Fish Marketing Act of 1969 (RSC 1970, c.F-13) and given the function of marketing and trading in fish, fish products and fish byproducts in and out of Canada with the objectives of ensuring more orderly marketing for the benefit of the whole fishery and achieving higher and more stable prices for the catch. The corporation received a grant for initial operating and establishment expenses but conducts its operations on a self-sustaining basis without parliamentary appropriations; it is financed by bank loans with government guarantee of repayment, or by direct loans. The corporation consists of a board of directors composed of a chairman, a president, one director for each participating province and four other directors appointed by the Governor-in-Council for a term not exceeding five years. The corporation reports to Parliament through the minister of fisheries and oceans.

**Grains Group.** In 1970 the minister responsible for the Canadian Wheat Board organized a special advisory group on grains (Grains Group) to co-ordinate, review and recommend federal policies for grain production, transportation and handling, and marketing. The minister

responsible for the Canadian Wheat Board serves as the chairman of the group. A group co-ordinator and three advisers are drawn from the federal departments of agriculture, external affairs and transport. Offices of the Grains Group are in Ottawa.

**Heritage Canada Foundation.** Established under the Canada Corporations Act (RSC 1970, c.C-32), the Heritage Canada Foundation is a national charitable non-profit organization. The foundation is the national voice of over 26,000 members and 200 groups on matters of conservation of Canada's architectural heritage. It is not a granting agency. It is financed by a \$13.18 million federal government endowment fund supplemented by grants and donations from corporations and individuals.

**Historic Sites and Monuments Board of Canada.** The Historic Sites and Monuments Act of 1953 (RSC 1970, c.H-6, as amended) provides the statutory base for the operation of the board and defines its role as adviser to the minister of the environment who implements and develops a national program of commemorating historic sites. The board determines whether persons, places or events are of national historic significance.

The act provides for 17 members — two representatives each from Ontario and Quebec and one each for the eight other provinces, Yukon and Northwest Territories — appointed by the Governor-in-Council, together with the dominion archivist, one representative from the National Museums of Canada and one from the environment department. The board is comprised for the most part of professional historians, archivists and architects.

**Immigration Appeal Board.** Established under the Immigration Appeal Board Act (RSC 1970, c.I-3) as a court of record in 1967, and continuing under the Immigration Act 1976, the board is empowered to hear appeals from individuals who are the subject of a deportation or an exclusion order, or whose application to sponsor a relative has been refused under the immigration act. The board also hears applications for the redetermination of status by persons claiming to be refugees in Canada. An appeal from a decision of the Immigration Appeal Board lies to the federal court.

**Indian Affairs and Northern Development, Department of** (Indian and Northern Affairs Canada). The department is responsible for Canada's Indian and Inuit people and all renewable and non-renewable resources, with the exception of game, in Yukon and Northwest Territories according to the Department of Indian Affairs and Northern Development Act, 1970, as amended. The department comprises five organizational areas: Indian and Inuit affairs, northern affairs, native claims, corporate policy, and administration. Its roles and responsibilities include: fulfilling the lawful obligations of the federal government arising from treaties and the Indian Act; providing basic services to status Indians in education, social assistance, housing and community infrastructure; assisting Indians and Inuit to acquire employment skills and to develop viable businesses; negotiating the settlement of claims relating to aboriginal title not extinguished by treaty or superseded by law, or relating to past non-fulfilment of government obligations; providing transfer payments to the governments of Yukon

and Northwest Territories to assist in financing basic services for all northerners, including Inuit, Indian and Métis peoples; and managing federal lands and the protection of the environment in the North either directly, or in collaboration with other federal departments such as EMR, environment, and fisheries and oceans. The department is in the process of fostering a transition from direct program delivery to Indians south of 60° to allow increasing self-management on the part of Indian bands, as well as moving toward formula financing for the two territories.

The commissioner of Northwest Territories and the commissioner of Yukon report to Parliament through the minister of Indian affairs and northern development. The minister is also responsible to Parliament for the Northern Canada Power Commission.

**Information Commissioner of Canada, Office of.** The information commissioner is appointed by Parliament to deal with complaints from individuals who allege that the government has failed to comply with rights contained in the Access to Information Act (Freedom of Information). The information commissioner may appear on behalf of complainants, with their consent or as a party, in applications before the federal court for review of decisions of government institutions to refuse access under the act. The information commissioner reports directly to Parliament annually and may submit special reports.

**Inspector General of Banks, Office of.** The position of inspector general of banks was established in 1924 (Bank Act, SC 1924, c.7). The office now operates under the Bank Act (SC 1980-81-82-83, c.40). The essential statement of responsibility that has appeared largely unchanged since the position was created requires the inspector to make or cause to be made an examination at least annually of each bank for the purposes of satisfying himself that the provisions of the act having reference to the safety of the interests of depositors, creditors and shareholders of the bank and other provisions of the act are being duly observed and that the bank is in a sound financial condition, and report thereon to the minister of finance.

**Insurance, Department of.** This department, which originated in 1875 as a branch of the finance department, was constituted a separate department in 1910. It is authorized and governed by the Department of Insurance Act (RSC 1970, c.I-17). Under the superintendent of insurance, who is the deputy head, the department administers statutes applicable to federally incorporated insurance, trust, loan and investment companies; provincially incorporated insurance companies registered with the department; British and foreign insurance companies operating in Canada; small loans companies and money-lenders; co-operative credit societies registered under the Co-operative Credit Associations Act; pension plans organized and administered for the benefit of persons employed in connection with certain federal works, undertakings and businesses; and life insurance issued to certain members of the public service prior to May 1954.

Under the relevant provincial statutes, the department examines trust and loan companies incorporated in Nova Scotia, trust companies incorporated in New Brunswick

and Prince Edward Island and insurance and trust companies incorporated in Manitoba. The department also provides actuarial services to the government. It reports to Parliament through the minister of finance.

**International Boundary Commission.** The commission functions by virtue of a 1925 treaty between Canada and the United States and the International Boundary Commission Act (RSC 1970, c.I-19). The commissioners, one for Canada and one for the United States, are empowered to inspect the boundary, to repair, relocate and rebuild monuments, to keep boundary vistas open, to regulate all work within 3.05 m (metres) of the boundary including structures of any kind or earthwork, to maintain at all times an effective boundary line and to determine the location of any point of the boundary line which may become necessary to settle any question that may arise between the two governments. Each country pays the salaries of its commissioner and his assistants; the costs of maintaining the boundary are shared equally. The Canadian section comes under the energy, mines and resources department for administrative purposes but the Canadian commissioner reports functionally to the secretary of state for external affairs. The commissioners meet at least twice annually, alternately in Ottawa and Washington.

**International Development Research Centre.** Established as a public corporation by act of Parliament (RSC 1970, c.21, 1st Supp.), the IDRC is an international organization supported financially by Canada. Its objectives are to initiate, encourage, support and conduct research into the problems of developing countries and into methods of applying and adapting scientific and technical knowledge to their socio-economic advancement. A chief purpose is to help them develop their own research skills and facilities.

The board of governors consists of 21 members; 11 of them, including the chairman and the president, must be Canadian. The IDRC reports to Parliament through the secretary of state for external affairs.

**International Fisheries Commissions.** The minister of fisheries and oceans reports to Parliament on Canadian participation in the several international fisheries commissions of which Canada is a member.

**International Joint Commission.** This commission was established under a Britain-United States treaty signed in January 1909 and ratified by Canada in 1911 (RSC 1970, c.I-20). The commission, composed of six members (three appointed by the president of the United States with the advice and consent of the Senate and three by the Government of Canada), is governed by five specific articles of the Boundary Waters Treaty of 1909. The commission's approval is required for any use, obstruction or diversion of boundary waters affecting the natural level or flow of boundary waters in the other country; and for any works which, in waters flowing from boundary waters or below the boundary in rivers flowing across the boundary, raise the natural level of waters on the other side of the boundary.

Problems arising along the common frontier are also referred to the commission by either country for examination and report, such report to contain appropriate conclusions and recommendations. Provided both coun-

tries consent, questions or matters of difference between the two countries may be referred to the commission for decision.

The commission was given responsibilities under the Canada-United States Great Lakes Water Quality Agreement of 1972 as amended by the water quality agreement of 1978 to assist in the implementation of the agreement by monitoring various programs in regard to their effectiveness and progress. The commission established a Great Lakes regional office at Windsor, Ont., staffed by American and Canadian public servants; operating costs are shared equally by the two governments.

The commission reports to the secretary of state for external affairs of Canada and to the secretary of state of the United States.

**Interprovincial and Territorial Boundary Commissions.** The Alberta-British Columbia and the Manitoba-Saskatchewan boundary commissions are at present the only interprovincial boundary commissions in which the federal government participates.

Three commissions are responsible for the following boundaries between provinces and territories: the British Columbia-Yukon Territory/Northwest Territories, the Alberta-Northwest Territories, and the Saskatchewan-Northwest Territories boundary commissions. A commission consists of one commissioner from each of the respective provinces and the surveyor general of Canada Lands. The Alberta-British Columbia Boundary Commission was established in 1974 by federal and provincial boundary acts. The other commissions were established by orders-in-council. The commissions are responsible for the resurvey and maintenance of the respective boundaries and report to Parliament through the minister of energy, mines and resources.

The boundary between Yukon and Northwest Territories is surveyed and maintained as necessary by the surveyor general of Canada Lands under authority of order-in-council PC 1981-1708 pursuant to the Canada Lands Surveys Act.

**Jacques Cartier and Champlain Bridges Inc.** was established under the Canada Business Corporations Act in November 1978. It operates and maintains the Jacques Cartier and Champlain bridges over the St. Lawrence River at Montréal, Que. It is a subsidiary of the St. Lawrence Seaway Authority and reports to Parliament through the minister of transport.

**Justice, Department of** (Department of Justice Canada). This department, established by SC 1868, c.39, now operates under authority of the Department of Justice Act (RSC 1970, c.J-2). The minister of justice is the official legal adviser of the Governor General and the Queen's Privy Council for Canada. It is his duty to see that administration of public affairs is in accordance with law, to superintend all matters connected with the administration of justice in Canada that are not within the jurisdiction of the provincial governments, to advise on the legislation and proceedings of the provincial legislatures, and generally to advise the Crown on all matters of law referred to him by the Crown. The minister of justice is, *ex officio*, Her Majesty's attorney general of Canada. In this capacity it is his duty to advise the heads of the departments of the federal government on all

matters of law connected with their departments, to settle and approve all instruments issued under the Great Seal of Canada, and to regulate and conduct all litigation for or against the Crown in the right of Canada. The minister also recommends to cabinet the selection of judges for the Supreme Court and the Federal Court of Canada as well as judges of superior, county and district courts. Amendments to the Judges Act now provide that the commissioner for federal-judicial affairs rather than the department is responsible for the administration of the Federal Court of Canada and for the administration of the salaries and pensions of other federally appointed judges. Responsibility for administration of the Supreme Court of Canada rests with the registrar. These matters remain the ultimate responsibility of the minister who submits the estimates for the courts and judges to Parliament. The minister of justice reports to Parliament for the Tax Court of Canada, the Law Reform Commission of Canada and the Canadian Human Rights Commission.

**Labour, Department of (Labour Canada).** The department was established in 1900 by an act of Parliament (SC 1900, c.24) and now operates under the authority of the Department of Labour Act (RSC 1970, c.L-2). Although labour legislation is primarily a provincial responsibility, Labour Canada, through the Canada Labour Code, regulates minimum labour standards, occupational safety and health, and industrial relations for about 600,000 Canadians who work in the federal jurisdiction. This covers such industries as interprovincial and international rail, road and pipeline transportation, shipping and related services, air transportation, interprovincial and international telecommunications, banks, certain Crown corporations, and industries declared to be for the general advantage of Canada, such as grain handling and uranium mining.

The department assists all parties in the collective bargaining process by providing mediation and conciliation to resolve labour disputes, preventive mediation, and grievance arbitration during the life of collective agreements in the federal jurisdiction.

Labour Canada also administers the Fair Wages and Hours of Labour Act, which applies to workers on federal construction works, the Merchant Seamen Compensation Act and the Government Employees Compensation Act. The department collects, analyzes and distributes a wide range of data and information on labour issues in Canada, and acts as the official liaison agency between Canada and the International Labour Organization. Through labour education and quality of working life programs, the department provides incentive grants aimed at improving union-management relations.

The Canada Labour Relations Board and the Labour Adjustment Review Board receive administrative support from Labour Canada and report to Parliament through the minister of labour.

**Law Reform Commission of Canada.** This commission was established (RSC 1970, c.23, 1st Supp.) as a permanent body to study and keep the laws of Canada under continuing and systematic review. The commission makes recommendations for the improvement, modernization and reform of federal laws including, without limiting the generality of the foregoing: the removal of anachronisms

and anomalies in the law; the reflection in and by the law of the distinctive concepts and institutions of the common law and civil law legal systems in Canada, and the reconciliation of differences and discrepancies in the expression and application of the law arising out of differences in those concepts and institutions; the elimination of obsolete laws; and the development of new approaches to and new concepts of the law in keeping with and responsive to the changing needs of Canadian society and its individual members. The commission reports to Parliament through the minister of justice.

**Library of Parliament.** This library was established by an act in relation to the Library of Parliament (SC 1871, c.21) now the Library of Parliament Act (RSC 1970, c.L-7). The library had been formed initially by the amalgamation of the legislative libraries of Upper and Lower Canada following their unification as the Province of Canada in 1841. The library is designated as a department within the meaning and purpose of the Financial Administration Act, the parliamentary librarian holding the rank of deputy minister. The parliamentary and the associate parliamentary librarians are appointed by the Governor-in-Council. The parliamentary librarian under the speaker of the Senate and the speaker of the House of Commons, assisted by a joint committee appointed by the two houses, is responsible for the control and management of the library including the branch libraries, the parliamentary reading room and the Confederation Building reading room. Persons entitled to borrow from the library are the Governor General, members of the Privy Council, the Senate and the House of Commons, officers of the two houses, judges of the Supreme Court of Canada and Federal Courts of Canada, and members of the Parliamentary Press Gallery. Research services to parliamentarians include the preparation of in-depth studies, background papers and current issue reviews. Additionally, research officers provide oral briefings or continuing assistance to parliamentary committees. Information and reference services include answering queries; indexing Senate committee minutes of proceedings and reports; maintaining extensive clipping files; providing a daily clipping service; bibliographies on request and computerized literature searches; and acting as an information centre for parliamentary information. The library's collection is accessible to other libraries through interlibrary loan.

**Machinery and Equipment Advisory Board.** This board, established in 1968, is responsible for considering applications for remission of duty on certain machinery and equipment and advising the minister of industry, trade and commerce as to the eligibility of such machinery for remission of customs duty. The board is composed of a chairman and the deputy ministers of industry, trade and commerce, finance and national revenue. The objective of the machinery program is to increase efficiency in Canadian industry by enabling machinery users to acquire advanced equipment at the lowest possible cost while affording tariff protection on machinery produced in Canada.

**Maritime Pollution Claims Fund.** Under the Canada Shipping Act (SC 1971, c.27), a strict liability is created on the part of a shipowner discharging oil from a ship in

Canadian waters without need to prove fault or negligence; this liability covers cost of remedial action if authorized by the Governor-in-Council, preventive action by the minister of transport and damages suffered by any person. Proceedings are taken against the shipowner and served on the administrator of the fund to make him a party to the litigation; upon failure to recover from the shipowner, the administrator is to the claimant in the position of a guarantor or unsatisfied judgment fund. If the ship cannot be identified, suit may be taken against the administrator. A special claim may be made directly to the administrator by fishermen suffering a loss of revenue resulting from an oil discharge attributable to a ship and not otherwise recoverable at law. The administrator reports annually to Parliament through the minister of transport.

**Medical Research Council.** Established in 1969 and operating under authority of RSC 1970, c.M-9, the council is a departmental Crown corporation of the federal government. It is composed of a president, a vice-president and 21 other members. The primary aim of the council is to support and develop research in the health sciences in Canadian universities and affiliated institutions. It reports to Parliament through the minister of national health and welfare.

**Merchant Seamen Compensation Board.** The board was established by authority of the Merchant Seamen Compensation Act (RSC 1970, c.M-11, as amended) and reports to the minister of labour. The three members are appointed by the Governor-in-Council. The board adjudicates claims for compensation made by injured seamen employed on ships registered in Canada when they are not entitled to worker compensation under any provincial worker compensation act or the Government Employees Compensation Act.

**National Advisory Council on Aging** (Department of National Health and Welfare). Established by a federal order-in-council in May 1980, the 18-member council is charged with assisting and counselling the minister of health and welfare on matters relating to the quality of life of Canada's aging population. In addition to advising on programs and policies, the council reviews needs and problems of older people and recommends remedial action; it consults with institutions and groups involved in aging or representing the aged, publishes reports, helps in information dissemination, and stimulates public discussion on aging.

**National Advisory Council on Fitness and Amateur Sport** (Department of National Health and Welfare). The council was established in 1962 by the Fitness and Amateur Sport Act (RSC 1970, c.F-25) to advise the minister responsible on matters relating to fitness and amateur sport. The council is an autonomous organization, composed of 30 members appointed by the Governor-in-Council, who represent every Canadian province and territory. Its committees meet periodically to discuss and examine matters related to their areas of concern. At least twice a year, a general council meeting is held and recommendations to the minister are formulated. Through numerous programs and operations, the council is involved in improving the participation of all Canadians in physical fitness and amateur sport as well as supporting Canadian

athletes. It reports to Parliament through the minister of health and welfare.

**National Arts Centre Corp.** The act establishing the corporation (RSC 1970, c.N-2) received assent in July 1966. The corporation consists of a board of trustees composed of a chairman, a vice-chairman, the mayors of Ottawa and Hull, the director of the Canada Council, the president of the Canadian Broadcasting Corp., the government film commissioner and nine other members appointed by the Governor-in-Council for terms not exceeding three years, except for the first appointees whose terms ranged from two to four years. The objects of the corporation are to operate and maintain the National Arts Centre, to develop the performing arts in the capital region and to assist the Canada Council in development of the performing arts elsewhere in Canada. The corporation reports to Parliament through the minister of communications.

**National Battlefields Commission.** This commission was established by an act of Parliament in 1908 (SC 1908, cc.57-58, as amended) to acquire, restore and maintain the historic battlefields at Québec City to form a National Battlefields Park. Composed of nine members, seven appointed by the federal government and one each by Ontario and Quebec, the commission is supported by the federal government through annual appropriations and is responsible to Parliament through the minister of the environment.

**National Capital Commission.** This commission is a Crown agency created by the National Capital Act (RSC 1970, c.N-3) to plan for and assist in the development, conservation and improvement of the national capital region. It is composed of 20 members (including the chairman) chosen from across the nation, to ensure that there will be input into its policies and activities from all regions of the country.

The commission is responsible for acquisition, development and maintenance of federal public lands in the capital region; it co-operates with municipalities in developing projects of both national and local interest and it advises the government on the siting and appearance of all federal government buildings in the 2 880 square kilometre area centred on Parliament Hill in Ottawa. The commission reports to Parliament through the minister of public works.

**National Council of Welfare** (Department of National Health and Welfare). The council is an advisory body of 21 private citizens, drawn from across Canada and appointed by the Governor-in-Council. Its members include past and present welfare recipients, public housing tenants and other low-income citizens, as well as lawyers, professors, social workers and others involved in voluntary service associations, private welfare agencies and social work education. The council advises the minister of national health and welfare on matters related to welfare. The office of the council carries out research and other support activities for the council.

**National Defence, Department of.** The department and the Canadian forces operate under the authority of the National Defence Act (RSC 1970, c.N-4). The minister of national defence is responsible for the control and

management of the Canadian forces and all matters relating to national defence and for construction and maintenance of all defence establishments and facilities required to defend Canada.

The deputy minister is the senior public servant in the department and the principal civilian adviser to the minister on all departmental affairs. He is responsible for ensuring that all policy direction from the government is reflected in the administration of the department and in military plans and operations. The chief of the defence staff is the senior military adviser to the minister and is charged with the control and administration of the forces. He is responsible for the effective conduct of military operations and the readiness of the Canadian forces to meet the commitments assigned to them by the government.

A defence council, consisting of the minister of national defence as chairman, his parliamentary secretary, the deputy minister of national defence, the chief of the defence staff, the vice-chief and the deputy chief of the defence staff, the assistant deputy minister (policy), and the commanders of maritime command, mobile command and air command, meets as required to consider and advise on major policy matters. Defence Construction Canada reports to Parliament through the minister of national defence.

**National Design Council** (Design Canada). The council was established by an act of Parliament in 1961 (RSC 1970, c.N-5) to promote and expedite improvement of design in the products of Canadian industry. The council makes recommendations on design policies and programs, and works with departments and agencies of the federal government, regional governments and other private and institutional bodies on design-related issues.

Council-sponsored activities include awards for design excellence, scholarships, publications, exhibits and design management seminars; all intended toward the promotion of product design in Canadian industry. Design Canada (regional and industrial expansion) serves as the administrative and program implementation arm of the council. The council has 17 members appointed by the Governor-in-Council and reports through its chairman to the minister of regional and industrial expansion.

**National Emergency Planning Establishment** (Emergency Planning Canada). In April 1974, Canada Emergency Measures Organization (EMO), the federal co-ordinating agency for civil emergency planning, became the National Emergency Planning Establishment, commonly known since 1975 as Emergency Planning Canada (EPC). EMO was originally created to initiate and co-ordinate the civil aspects of defence policy delegated to federal departments and agencies to meet the threat of nuclear war.

Emergency Planning Canada has an extended role to co-ordinate and assist planning to ensure that the federal government is ready to meet the effects of natural or man-made disasters. Such planning is part of the normal responsibilities of federal government departments, Crown corporations and agencies. An EPC regional director in each provincial capital maintains contact with other federal departments and with provincial and municipal governments.

EPC promotes emergency preparedness of the federal government and encourages other levels of government

to plan by providing grants for approved emergency planning projects; makes arrangements for federal assistance to provinces to offset costs resulting from emergencies; sponsors courses for representatives from the public and private sectors; and conducts an information and research program.

Civil emergency preparedness extends beyond the borders of Canada to nations abroad, including the US and NATO countries. The assistant secretary to the cabinet for emergency planning represents Canada on the NATO senior civil emergency planning committee and the director general (plans) on the civil defence committee. Although attached for purposes of administrative support to the defence department, the agency receives ministerial direction from the president of the Privy Council.

**National Energy Board.** This board was established under the National Energy Board Act, 1959 (RSC 1970, c.N-6). The board is a court of record. Its regulatory responsibilities under the National Energy Board Act encompass mainly the licensing of exports of oil and oil products, natural gas and gas products, electricity, and the licensing of imports of gas and heavy fuel oil; the certification of interprovincial and international pipelines and international and designated interprovincial power lines; the authorization for pipelines to cross or be crossed by public utilities; the control of the safety of these pipelines; and the regulation of the tolls and tariffs of pipeline companies under federal jurisdiction. In addition, the board administers certain aspects of the Energy Administration Act and the Northern Pipeline Act. The board advises the government on matters relating to energy.

**National Farm Products Marketing Council.** Established in 1972 under the Farm Products Marketing Agencies Act (SC 1972, c.65), the council consults with producers, commodity boards, processors, consumer groups, and provincial and federal governments, and co-ordinates their views on the establishment and operation of national marketing agencies. It assists and supervises the operations of agencies and promotes more effective marketing of farm products in interprovincial and export trade. The goal is to maintain and promote an efficient, competitive and expanding agricultural industry, and to have due regard for the interests of those affected by the operations of national agencies such as the Canadian egg marketing agency, the Canadian turkey marketing agency and the Canadian chicken marketing agency.

The council consists of a chairman, a vice-chairman, and six other members appointed by the Governor-in-Council and is directly responsible to the minister of agriculture. Council headquarters is in Ottawa.

**National Film Board.** The board, established in 1939, operates under the National Film Act (RSC 1970, c.N-7) which provides for a board of governors of nine members: a government film commissioner, appointed by the Governor-in-Council, who is chairman of the board, three members from the public service of Canada and five members from outside the public service. The board reports to Parliament through the minister of communications. It is responsible for advising the Governor-in-Council on film activities and is authorized to produce and distribute films in the national

interest and, in particular, films designed to interpret Canada to Canadians and to other nations. The board is responsible for co-ordinating all film and audio-visual production required by government departments, producing the material itself or tendering contracts to Canadian companies in the private sector. Its head office is in Ottawa and its operational headquarters is in Montréal.

**National Health and Welfare, Department of** (Health and Welfare Canada). This department was established in October 1944 under the Department of National Health and Welfare Act (RSC 1970, c.N-9). The deputy minister of national health and welfare administers nine branches: health services and promotion, health protection, medical services, corporate management, social services programs, income security programs, policy planning and information, intergovernmental and international affairs and fitness and amateur sport.

Departmental programs on health include hospital insurance and diagnostic services, medical care insurance, extended health care, health resources, food and drug supervision, narcotics control, federal emergency services, environmental health, adverse drug reaction reporting, operation of a central clearing house for poison control centres, health, medical and hospital services to status Indians and Inuit across Canada and all residents of Yukon and Northwest Territories, family planning grants and information, the promotion of healthy lifestyles and excellence in amateur sport, and government employee health services as well as assistance and consultation services to the provinces on request to assist the development and improve the efficiency and effectiveness of health services.

Welfare programs include the Canada Pension Plan, senior citizen security, guaranteed income supplements and spouses' allowances, family allowances and the Canada Assistance Plan. There are also developmental programs, including national welfare grants, and grants to groups of retired persons. Bureaus on aging and rehabilitation provide consulting services on issues related to aging and the aged and on programs to enhance the integration of disabled persons into their communities and society.

**National Library of Canada.** The library came into existence in January 1953 with the proclamation of the National Library Act (RSC 1970, c.N-11). The library compiles and maintains a computerized national union catalogue, representing the holdings of more than 300 Canadian libraries, to facilitate the interlibrary loan of books from major collections in the country; it compiles and publishes the national bibliography, *Canadiana*, in order to establish a complete inventory of what is published in Canada or relates to Canada. It administers the legal deposit regulations which require Canadian publishers to deposit copies of their publications with the library. It provides reference and information services in the social sciences and humanities, with special emphasis on Canadian studies. The library's collection of books and documents totals more than 2 million. The national librarian reports to Parliament through the minister of communications.

**National Museums of Canada.** This is a departmental Crown corporation established in April 1968 by the

National Museums Act (RSC 1970, c.N-12) to join under one administration the National Gallery of Canada, the National Museum of Man (including the Canadian War Museum), the National Museum of Natural Sciences, and the National Museum of Science and Technology (including the National Aviation Museum). As of 1972, the corporation developed five national programs pursuant to a national museum policy designed to preserve the collections and facilitate access to them. The mobile exhibits program provides direct service to the public. The others, aimed at assisting the museum community, are: the Canadian conservation institute, the Canadian heritage information network, the international program and the museum assistance programs which make available grants and technical assistance for public programming, upgrading and purchase of equipment, professional training, registering collections, staging exhibitions, holding special activities and developing conservation capabilities.

The corporation operates under the authority of a board of trustees which reports to Parliament through the minister of communications. The board consists of a chairman, a vice-chairman (who is also secretary general and chief executive officer of the corporation) and 12 members, including two ex-officio members — the director of the Canada Council and the president of the National Research Council.

The corporation's objective is to demonstrate, and to assist others to demonstrate, the products of nature and culture, with particular but not exclusive reference to Canada, and to disseminate knowledge of Canada's natural and cultural legacy for the enrichment of present and future generations.

The corporation also records, preserves and assists others to understand the national heritage by developing, researching and maintaining collections of objects and information in accordance with generally accepted museological standards and practices.

**National Parole Board.** The board was established in 1959 by the Parole Act (RSC 1970, c.P-2); it has exclusive jurisdiction and absolute discretion to grant, deny or revoke day parole and full parole for inmates in both federal and provincial prisons, except for cases under the jurisdiction of provincial parole boards. The board is ultimately responsible for granting unescorted temporary absences, but in some instances delegates this authority to directors of institutions. The board also has the authority to revoke mandatory supervision.

The board has jurisdiction over persons who are serving a sentence of imprisonment as a result of any federal offence but it has no jurisdiction over juveniles or over anyone in custody who is serving a sentence intermittently. The board has authority to impose the conditions under which the parolee or inmate under mandatory supervision will live in the community. The board has responsibility under the Criminal Records Act to make recommendations to the solicitor general concerning applications for pardon.

The National Parole Board comprises 26 full-time members appointed for a period up to 10 years by the Governor-in-Council on the recommendation of the solicitor general. Temporary members may be appointed for terms not exceeding one year to substitute for full-time

members or to assist the board with unusually heavy case loads. Representatives from police forces, local governments, professional associations, trade unions, or community associations in the five regions of Canada serve on regional panels as community board members. They are designated by the solicitor general to act as regular board members when release is being considered for inmates convicted of murder, or inmates serving sentences of preventive detention as dangerous offenders. The board reports to Parliament through the solicitor general.

**National Research Council of Canada.** NRC is a Crown corporation established by Parliament to undertake, assist and promote engineering and scientific research in furthering Canada's development. The council operates 17 laboratory divisions as well as the Canada Institute for Scientific and Technical Information.

A governing council of 21 members, drawn from across the country and appointed by the government, provides the overall supervision and direction to NRC's research programs and policies. Particular projects are undertaken by the council's laboratories at the request of, or in consultation with, federal government departments, provincial and municipal governments, industry in Canada and other organizations or groups in the public or private sector. The council initiates research projects deemed to be of special importance to Canada and devotes about 25% of its intramural research effort to promising basic and exploratory research. Extramural research is supported by the council through financial assistance to selected projects in industry in Canada. Special emphasis is given toward ensuring that maximum national benefit accrues from the research undertaken extramurally with council support. Methods have been developed for transferring technology to industry and to the public sector, and for the publication and diffusion of research results and technical information. NRC reports to Parliament through a designated minister.

**National Revenue, Department of** (Revenue Canada Customs and Excise; Revenue Canada Taxation). From Confederation until 1917, customs and inland revenue acts were administered by separate departments. In 1917 the federal government passed the Income War Tax Act, as a temporary measure, administered by a commissioner of taxation attached to the finance department. The national revenue department was established in 1927 with two separate components, taxation and customs and excise. Each of these components under one minister operates with its own deputy minister and departmental organization.

The customs and excise component is responsible for assessment and collection of customs and excise duties as well as of federal sales tax and excise taxes. The taxation component is responsible for assessment and collection of taxes under the Income Tax Act of Canada (RSC 1970, c.148 as amended) as well as contributions under the Canada Pension Plan Act and premiums under the Unemployment Insurance Act. Under an agreement with the provinces, the taxation component assesses and collects corporate and individual income tax for most of the provinces. Quebec, Alberta and Ontario administer their own provincial corporate income tax and Quebec its own individual income tax and the Quebec Pension Plan.

**Natural Sciences and Engineering Research Council.** The council was established in 1978 as a Crown corporation under the terms of the Government Organization (Scientific Activities) Act, 1976 (SC 1976-77, c.24) and reports to Parliament through a designated minister. The council is composed of a president, a vice-president, and 20 members representing Canadian universities, industry and labour. It promotes and assists research in the natural sciences and engineering other than the health sciences and advises the minister in respect of such matters relating to such research as the minister may refer to the council for its consideration.

**Northern Canada Power Commission.** The commission was established by an act of Parliament in 1948 (RSC 1970, c.N-21) to provide power to points in Northwest Territories where a need developed and where power could be supplied on a self-sustaining basis; the act was amended in 1950 to give the commission authority to provide similar services in Yukon. The name of the commission (formerly the Northwest Territories Power Commission) was changed in 1956. It is composed of a chairman and four members appointed by the Governor-in-Council. The commissioners of Northwest Territories and Yukon each recommend the appointment of one member.

**Northern Transportation Co. Ltd.** NTCL is a Canadian company, incorporated under federal legislation and continued under the Canada Business Corporations Act. It is a proprietary Crown corporation. Except for directors' qualifying shares, all of the issued and outstanding shares are held by the minister of transport in trust for Her Majesty in right of Canada. NTCL is subject to the Government Companies Operations Act and was proclaimed an agent of the Crown in July 1949.

The company provides marine transportation services for bulk and deck cargo in Northern Canada and the Arctic. It has operated throughout the Mackenzie River watershed since 1934, and along the Western Arctic Coast and islands since 1957. Service in the Keewatin was inaugurated in 1975, and NTCL has since provided resupply services to five communities along the west coast of Hudson Bay and Coral Harbour on Southampton Island.

The company has two subsidiaries. Grimshaw Trucking and Distributing provides a general merchandise trucking service in Alberta and Northwest Territories. Norran Offshore Ltd. charters seismographic and geotechnical vessels to the offshore oil and gas exploration industry. NTCL reports to Parliament through the minister of transport.

**Patent Appeal Board.** This is an advisory body established in 1970 under the Patent Act (RSC 1970, c.203). Its function is to review rejections of applications for patents of invention when applicants request review, to conduct hearings to consider arguments of applicants, and to make recommendations to the commissioner of patents for ultimate disposition of the applications. It acts in a similar capacity with delegated powers from the minister of consumer and corporate affairs under the Industrial Design Act (RSC 1970, c.150) to consider rejections of industrial design applications made by the registrar of copyright and industrial design. The board consists of a chairman, a vice-chairman and two other members.

**Pension Appeals Board.** This board, established under the Canada Pension Plan Act (RSC 1970, c.C-5) hears appeals under the Canada Pension Plan and under certain provincial pension plans. It also hears appeals from certain decisions of the umpire under the Unemployment Insurance Act (SC 1971, c.48) as amended. The board consists of two judges of the Federal Court of Canada or of a superior court of a province appointed as chairman and vice-chairman, and from one to eight other persons, each a judge of the federal court or of a superior, district or county court of a province. For appeals under the Canada Pension Plan, the board reports to Parliament through the minister of national health and welfare.

**Pension Review Board.** The board was created under the minister of veterans affairs by amendments to the Pension Act 1971 (SC 1970-71, c.31). Further amendments were made in May 1977, by the Act to Amend the Pension Act (SC 1976-77, c.13). Composed of a chairman, deputy chairman and five other members, the board is an independent and autonomous body that hears appeals from pension applicants dissatisfied with decisions of entitlement boards or assessment boards of the Canadian Pension Commission. The Pension Review Board is also responsible for formally interpreting provisions in parts of the Pension Act.

**Petro-Canada.** In July 1975 the Petro-Canada Act (SC 1974-75-76, c.61) established Petro-Canada as a Crown corporation to increase the supply of energy available to Canadians, to assist the government in formulating its national energy policy and to increase the Canadian presence in the petroleum industry. The corporation's board of directors consists of a chairman, president and not more than 13 other persons appointed by the Governor-in-Council. Its head office is in Calgary, Alta. The corporation reports to Parliament through the minister of energy, mines and resources.

**Prairie Farm Rehabilitation Administration.** PFRA, a branch of Agriculture Canada, was established in 1935 (RSC 1970, c.P-17) to assist in the relief of drought in Manitoba, Saskatchewan and Alberta. PFRA's 88 community pastures are operated on some 925 000 ha (hectares) of land submarginal for cereal production. PFRA has constructed many large irrigation and water storage projects and has assisted technically and financially in more than 185,000 dugouts, wells, dams and irrigation projects for on-farm water supplies. A PFRA tree nursery has distributed more than 450 million tree seedlings to farmers for farm and field shelterbelts. Currently, PFRA is involved in major agreements for water development and drought proofing with the provinces of Manitoba and Saskatchewan, and has recently undertaken several soil conservation projects across the Prairies.

**Preparatory Commission for Conversion to the Metric System** (Metric Commission Canada). The commission was established by the Metric Commission Order of June 1971. It consists of a chairman and 10 part-time commissioners. The executive director is responsible for the direction of the full-time commission staff.

The commission advises the minister of consumer and corporate affairs on conversion to the metric system and

assists sectors to prepare and implement metric conversion plans. It disseminates information related to these plans and to metric conversion generally. Initially, there were over 100 sector committees covering all areas of the economy; of these, more than 50 have completed their assigned work. The remaining sectors, operating under the umbrella of six co-ordinating committees, continue with their conversion activities. Members of these committees represent industry, labour, consumers, trade, standards and service associations, governments and other concerned bodies.

Each committee developed its own conversion plan aimed at achieving metric conversion with a minimum of disruption to the industry and its customers. Committees monitor the progress of conversion, co-ordinate with customers, suppliers and related industries and amend or modify their activities to achieve an orderly conversion.

**Privacy Commissioner of Canada.** The privacy commissioner is appointed by Parliament to deal with complaints by citizens who allege that the federal government has failed to comply with their rights to personal information as outlined in the Privacy Act.

The commissioner reviews and audits the collection, use and disposal of personal information by the government institutions listed in the schedule to the privacy act.

The privacy commissioner reports directly to Parliament annually and may submit special reports.

The commissioner undertakes studies, as requested by the minister of justice, relating to the privacy of individuals, the extension of rights to which individuals are entitled under the act, and the treatment of personal information by government institutions other than those within the legislative authority of Parliament.

**Privy Council Office.** For administrative purposes, the office is regarded as a department of government for which the prime minister has responsibility as set forth in order-in-council PC 1962-240. The clerk of the Privy Council, under whose direction its functions are carried out, is considered as a deputy head and takes precedence among the chief officers of the public service. The genesis of the office is in Sections 11 and 130 of the Constitution Act, 1867, which constituted a council to aid and advise in the Government of Canada, to be styled the Queen's Privy Council for Canada. In 1940, with the wartime development of cabinet committees and the consequent need for orderly secretarial procedures such as agenda, explanatory memoranda and minutes, the clerk of the Privy Council was designated secretary to the cabinet, and the cabinet secretariat was brought into being in the Privy Council office. Since 1940, the office has been further reorganized, developed and enlarged and certain of its administrative support functions and those of the prime minister's office have been closely integrated in the interests of efficiency and economy.

The organization consists primarily of the cabinet secretariat with two divisions reporting to the clerk of the Privy Council and secretary to the cabinet. Each division contains a number of secretariats that support the cabinet and its committees. The secretariats prepare agenda, circulate necessary documents to ministers, and record and circulate decisions. They communicate with government departments and agencies and provide advisory support

for the prime minister. Other sections of the office advise the prime minister on senior appointments, constitutional matters, emergency planning, and the exercise of his prerogative to allocate responsibilities between ministers. Submissions to the Governor-in-Council are received, draft orders and regulations are prepared, approved orders are circulated and the federal statutory regulations are edited, registered and published in the *Canada Gazette*.

**Public Archives of Canada.** The public archives was founded in 1872 and is administered under the Public Archives Act (RSC 1970, c.P-27) by the dominion archivist who has the rank of a deputy minister and reports to Parliament through the minister of communications. Its purpose is to assemble, conserve and make available to the public a comprehensive collection of source material relating to the history of Canada. It also has broad responsibilities to promote efficiency and economy in the management of federal government records. The archives branch of the public archives is a centre for research on the development of Canada. In addition to selected records of the federal government, it possesses an extensive collection of private papers of individuals and societies, a map collection which is the most important of its kind in the country, and extensive collections of paintings, drawings, prints, photographs, machine-readable data, sound recordings and films relating to Canada. A specialized library is also at the disposal of researchers. The records management branch operates a large records centre in Ottawa, and regional centres in Toronto, Montréal, Vancouver, Edmonton, Winnipeg and Halifax where non-current departmental records are centralized, stored and serviced and assists departments in their records management programs. The records management branch also operates the central microfilm unit for federal departments.

Under the terms of the Laurier House Act (RSC 1952, c.163), the public archives is responsible for the administration of Laurier House in Ottawa as a museum.

**Public Service Commission.** Arrangements were made for civil service appointments under the first Civil Service Act of 1868 but the first civil service commission was not created until 1908. This introduced the principle of selection by merit as established by competitive examination. The Civil Service Act of 1918 gave the commission authority to control recruitment, selection, appointment, classification and organization and to recommend rates of pay. The Civil Service Act of 1961 strengthened the principles of the merit system, clarified the commission's role in other areas of personnel administration, and gave staff associations the right to be consulted on remuneration and conditions of employment.

The Public Service Employment Act (RSC 1970, c.P-32) which came into force in March 1967, redefined the commission's role as the central staffing agency and extended its authority to cover certain groups of employees exempt from the previous acts. The public service is specified in the Public Service Staff Relations Act. It does not include Crown corporations, such as the Canadian Broadcasting Corp., Canada Mortgage and Housing Corp., Canadian National Railways and Air Canada. The new act reaffirmed the merit principle, and permitted delegation of

the commission's authority, although not its responsibility to Parliament. Under the act, the commission was relieved of responsibility for recommending rates of pay and conditions of service to the government, for classification, and for consultation with staff associations on matters that are now the subject of collective bargaining.

By orders-in-council of 1972 and 1976, the commission was assigned the duty of investigating cases of alleged discrimination on grounds of sex, race, national origin, colour, religion, marital status or age with respect to the application and operation of the Public Service Employment Act; the appeals and investigation branch is responsible for this function.

The Public Service Commission reports directly to Parliament. The secretary of state has traditionally been the minister who presents the commission's report to the House of Commons, and answers parliamentary questions on the commission's behalf.

**Public Service Staff Relations Board** is a quasi-judicial tribunal responsible for administration of the Public Service Staff Relations Act (RSC 1970, c.P-35, as amended by SC 1972, c.18, SC 1973-74, c.15 and SC 1974-75-76, c.67). Its primary mandate as a neutral third party is to facilitate the resolution of collective bargaining and other disputes. Adjudicating on grievances involving the application or interpretation of provisions of collective agreements and most types of disciplinary action constitutes the largest volume of cases. The board deals also with such proceedings as applications for certification and complaints of unfair labour practices.

The board consists of a chairman, vice-chairman, not less than three deputy chairmen and other full-time members and part-time members as the Governor-in-Council considers necessary. All full-time appointments are not to exceed seven years except for the chairmen whose appointments are not to exceed 10 years. The board reports to Parliament through a designated minister, at present the president of the Privy Council.

A pay research bureau, part of the board, conducts research and carries out surveys on rates of pay, benefits and conditions of employment primarily as they relate to units of public service employees covered by a system of collective bargaining established by the Public Service Staff Relations Act. The bureau also engages in similar activities in respect of groups that are excluded from that process.

**Public Works, Department of (Public Works Canada).** This department was constituted in 1867 and operates under the legislative authority of the Public Works Act (RSC 1970, c.P-38, as amended). It is the primary agent of the federal government in the development and management of real property, providing office accommodation for some 90 federal departments and agencies, together with architectural, engineering, construction management and realty services for special purpose facilities. The department also has responsibilities in transportation (roads) and marine (dredging) works. It is decentralized, with regional headquarters at Halifax, Montréal, Ottawa, Toronto, Edmonton and Vancouver, and subsidiary offices in all but the national capital region. Main line functions are design and construction, realty planning and development and realty services plus departmental planning and co-ordination

(including policy research); in addition, the fire commissioner of Canada operates under the authority of the minister of public works, with responsibility for protection of life of occupants of government property and for the minimization of property loss as a result of fire.

The departmental property inventory includes certain holdings which are developed using an existing Crown corporation (the Canada Lands Co. Ltd.) as a corporate structure. Three subsidiary Crown corporations have been established: The Canada Lands Co. (Le Vieux-Port de Québec) Inc., the Canada Lands Co. (Le Vieux-Port de Montréal) Ltd., and the Canada Lands Co. (Mirabel) Ltd. The minister of public works is also responsible for the Toronto Harbourfront Corp., Harbour Place Vancouver, and the Canadian Museums Construction Corp.

**Queen Elizabeth II Canadian Research Fund.** The Queen Elizabeth II Canadian Research Fund Act (SC 1959, c.33) established a fund of \$1 million to be administered by a board of trustees to aid in research on children's diseases. The prime minister reports to Parliament on operations of this fund.

**Regional Industrial Expansion, Department of.** The federal government announced the merging of the departments of industry, trade and commerce and of regional economic expansion in 1982. Legislation to complete the merger was passed in the House of Commons in October 1983, received royal assent in November 1983, and was officially proclaimed in December 1983. The new department of regional industrial expansion (DRIE) operates under the authority of Government Organization Act 1983.

DRIE is the principal department for encouraging investment in viable industrial undertakings in manufacturing, resource processing (and related service industries), tourism and small business. The department's mandate is to promote productive investments to achieve industrial development and renewal in all regions, thereby contributing to job creation, exports, improved competitiveness and non-inflationary development.

The department is organized into a number of functional groups: small business and special projects; policy; tourism; capital and industrial goods; consumer goods, services and resource processing; the comptroller's office; northern and special programs; and a native economic development program. It operates 12 regional offices and 24 local offices throughout Canada.

The minister also reports to Parliament on behalf of the Federal Business Development Bank; the Foreign Investment Review Agency; the Cape Breton Development Corp.; Canadian Patents and Development Ltd. Boards and other organizations reporting to the minister are: the native economic development board; the textile and clothing board; the Canadian industrial renewal board; the machinery and equipment advisory board; the industrial and regional development policy board; the industrial and regional development projects board; the Atlantic Development Corp. Canada and the national design council.

**Restrictive Trade Practices Commission.** The commission was established by the Combines Investigation Act (RSC

1970, c.C-23 as amended by SC 1974-75-76, c.76). In respect of trade practices contained in Part IV. 1 of the act, on application of the director of investigation and research and after holding a hearing at which evidence is submitted by the director and by the party against whom an order is sought, the commission acting as an independent court of record may issue an order prohibiting the practice. In respect of restrictive trade practices contained in Part V of the act, the commission may hold hearings under Section 47 of the act and appraise evidence submitted by the director and the parties under investigation, to report to the minister of consumer and corporate affairs.

**Roosevelt Campobello International Park Commission.** Established by the Roosevelt Campobello International Park Commission Act (SC 1964-65, c.19), the commission consists of six members, three appointed by the Government of Canada (one on the recommendation of the New Brunswick government) and three by the government of the United States (one on the recommendation of the state of Maine), to administer the Roosevelt Campobello International Park at Campobello, NB. The Canadian section of the commission reports to Parliament through the secretary of state for external affairs.

**Royal Canadian Mint.** In operation since January 1908, the mint was first established as a branch of the Royal Mint under the United Kingdom Coinage Act of 1870. In December 1931, by an act of the Canadian Parliament, it became the Royal Canadian Mint and operated as a branch of the finance department. By the Government Organization Act of 1969, the mint became a Crown corporation, reporting to Parliament through the minister of supply and services. It operates under authority of RSC 1970, c.R-8.

The latter change was made to provide for a more industrial type of organization and for flexibility in producing coins of Canada and other countries; buying, selling, melting, assaying and refining gold and other precious metals; and producing medals, plaques and other devices. The mint has a seven-member board of directors appointed by the Governor-in-Council. The master of the mint is its chief executive officer. The chairman of the board is appointed for a four-year period, subject to re-appointment; five other directors, two from inside and three from outside the public service, are appointed for three years. The mint operates basically as a manufacturing enterprise. Financial requirements are provided through loans from the consolidated revenue fund.

**Royal Canadian Mounted Police.** This civil force, organized and administered by the federal government, was established in 1873 as the North-West Mounted Police. It now operates under authority of the Royal Canadian Mounted Police Act (RSC 1970, c.R-9) and is responsible for enforcing federal laws throughout Canada. By agreement with the governments of eight provinces (all except Ontario and Quebec) it is also responsible for enforcing the Criminal Code of Canada and provincial laws in those provinces, under the direction of their attorneys general. The force is under contract with 191 municipalities, assuming enforcement responsibilities for criminal, provincial and municipal laws. Yukon and Northwest Territories are policed exclusively by the Royal Canadian

Mounted Police. The commissioner, appointed by the Governor-in-Council, has control and management of the force and of all matters connected therewith, under the direction of the solicitor general of Canada.

**St. Lawrence Seaway Authority.** This authority was established by an act of Parliament in 1951 (RSC 1970, c.S-1) and came into force in July 1954. It was incorporated for the purposes of constructing, maintaining and operating all such works as may be necessary to provide and maintain, either wholly in Canada or in conjunction with works undertaken by an appropriate authority in the United States, a deep waterway between the Port of Montréal and Lake Erie. Three Crown corporations, the Seaway International Bridge Corp. Ltd., the Great Lakes Pilotage Authority, Ltd. and the Jacques Cartier and Champlain Bridges Inc. are subsidiaries of the St. Lawrence Seaway Authority. The authority is composed of a president, a vice-president and a member, and reports to Parliament through the minister of transport.

**Science Council of Canada.** The Science Council of Canada is Canada's national advisory agency on science and technology policy. Created in 1966, its primary functions are: to analyze science and technology policy issues; to recommend policy directions to government; to alert Canadians to the impact of science and technology on their lives; and to stimulate discussion of science and technology policy among governments, industry and academic institutions. Reporting to Parliament through the minister of state for science and technology, the science council operates at arm's length from government, designing its own programs of research and publishing its findings at its own discretion.

**Science and Technology, Ministry of State for.** This ministry was established by order-in-council PC 1971-1695 in August 1971, with the primary purpose of formulating and developing policies in relation to federal government activities that affect the development and application of science and technology. It is organized into an operations branch, a policy and strategy branch and a communications branch. Its administrative functions have been handled jointly with the minister of state for economic and regional development. The Science Council of Canada, the Natural Sciences and Engineering Research Council and the National Research Council all report to Parliament through the minister of state for science and technology.

**Seaway International Bridge Corp. Ltd.** This corporation was established under the Canada Companies Act, by letters patent in November 1962 and received its certificate of continuance under the Canada Business Corporations Act on February 20, 1980. It operates and maintains the international toll bridge system between Cornwall, Ont. and Rooseveltown, NY on behalf of the owners, the St. Lawrence Seaway Authority and the Saint Lawrence Seaway Development Corp. It reports to Parliament through the minister of transport.

**Secretary of State of Canada, Department of the** (Secretary of State). The duties, powers and functions of the secretary of state (RSC 1970, c.S-15) extend to and include all matters over which Parliament has jurisdiction not by

law assigned to any other department, branch or agency of the federal government relating to support for postsecondary education, promotion of official languages, translation and interpretation, terminology, official languages in education, youth, Canada student loans, citizenship registration, multiculturalism and race relations, native citizens, women, human rights, voluntary action, disabled persons and state ceremonial and symbols.

The secretary of state reports to Parliament for the Public Service Commission.

**Social Development, Ministry of State for.** (On June 30, 1984 the prime minister announced that this ministry would be discontinued.)

**Social Sciences and Humanities Research Council.** The council was established by the Government Organization (Scientific Activities) Act, 1976 (SC 1976-77, c.24) as a Crown corporation to promote and assist research and scholarship in the social sciences and humanities. The council is composed of the president and of 21 other members, both from the academic community and from other areas of society. It reports to Parliament through the minister of communications.

**Solicitor General, Department of the** (Solicitor General Canada). Before 1936, the office of the solicitor general was either a cabinet post or a ministerial post outside the cabinet. From 1936 to 1945 the position did not exist, the duties of the office being wholly absorbed by the attorney general of Canada. The Solicitor General Act of 1945 reestablished the solicitor general as a cabinet officer. In 1966 a new department of the solicitor general was created (RSC 1970, c.S-12); the solicitor general became the cabinet minister with primary responsibility in the fields of corrections and law enforcement. He is responsible for the Royal Canadian Mounted Police and the Correctional Service of Canada and also reports to Parliament for the National Parole Board, an independent agency.

**Standards Council of Canada.** The council was established by an act of Parliament (RSC 1970, c.41, 1st Supp.) in October 1970. Its objectives are to foster and promote voluntary standardization in fields relating to the construction, manufacture, production, quality, performance and safety of buildings, structures, manufactured articles and products and other goods, including their components, as a means of advancing the national economy, benefiting the health, safety and welfare of the public, assisting and protecting consumers, facilitating domestic and international trade and furthering international co-operation in the field of standards. The council does not write standards but brings together, into a national federation called the National Standards System of Canada, independent organizations recognized for their competence in standards-writing, certification and testing, as well as the Canadian national committees created to co-ordinate Canadian participation in international standardization. The council is the member for Canada of an international organization for standardization (ISO) and sponsors the Canadian national committee of an international electro-technical commission (IEC).

The council created a standards information service to assist standards users requiring information on domestic,

foreign and international standards, certification systems and technical regulations. This service is Canada's central enquiry point on standards and assists overseas callers with information on current Canadian practice. The council also provides the Canadian outlet for international standards of ISO and IEC, and national standards of 12 other countries.

The council consists of not more than 57 members including six federal representatives, 10 representing the provinces and 41 other members. Membership is broadly representative of all levels of government, primary and secondary industries, distributive and service industries, trade associations, labour unions, consumer associations and the academic community. The council is a statutory corporation and, in the main, is financed by parliamentary appropriation. The council is independent in its policies and operations, reporting to Parliament through the minister of consumer and corporate affairs.

**Statistics Canada.** The Dominion Bureau of Statistics was set up by statute in 1918 as the central statistical agency for Canada (SC 1918, c.43). In 1948 this statute, which had been consolidated as the Statistics Act (RSC 1927, c.190), was repealed and replaced by the Statistics Act (RSC 1952, c.257) which was amended by SC 1952-53, c.18, assented to March 31, 1953. The 1971 Statistics Act (SC 1971, c.15) replaced that statute.

The functions of Statistics Canada are to compile, analyze and publish statistical information relative to the commercial, industrial, financial, social and general condition of the people and to conduct regularly a census of population, housing and agriculture as required under the act.

Statistics Canada is a major publication agency of the federal government; its reports cover all aspects of the national economy and social conditions of the country. The administrative head of the bureau is the chief statistician of Canada who has the rank of a deputy head of a department and reports annually to Parliament.

Statistics Canada has offices in St. John's, Halifax, Montréal, Ottawa, Sturgeon Falls, Toronto, Winnipeg, Regina, Edmonton and Vancouver with facilities to provide information collected by the bureau and to explain how such data can be used.

**Status of Women, Office of the Co-ordinator** (Status of Women Canada). Created in response to recommendations made by the Royal Commission on the Status of Women in Canada in 1971, the agency's mandate is to ensure that federal legislation, policies and programs consider women's concerns. It recommends policy changes to other federal bodies and liaises with other federal departments, with provincial governments, advisory councils and national women's organizations. On the international level, the agency works to ensure that Canadian women's concerns are taken into account when delegations are preparing to participate in international assemblies. The agency is located in Ottawa.

**Supply and Services, Department of** (Supply and Services Canada). This department was established in April 1969 (RSC 1970, c.S-18). It was formed through amalgamation of the departments of defence production and public printing and stationery, the shipbuilding branch

of the transport department, the office of the comptroller of the treasury, the central data processing service bureau of Treasury Board and the bureau of management consulting services from the Public Service Commission. With the disbanding of Information Canada in 1976, two functions, publishing and expositions, became the responsibility of the department.

The department is organized into two major administrations, each headed by a deputy minister. The supply administration is responsible for purchasing, printing, publishing, traffic management, security, equipment maintenance and repair and warehousing and distribution. Since the 1973-74 fiscal year, the supply administration has been on a cost recovery basis for services rendered to its customers. The supply administration has 29 regional or district supply offices across Canada and an overseas supply office in Washington, DC, in London, England and in Koblenz, Federal Republic of Germany.

The services administration provides payment or cheque-issuing services for all federal departments, maintains the fiscal accounts of Canada and prepares the public accounts. It offers departments and agencies a broad range of services in management consulting, auditing and computer services. It also provides administrative services for pay, pensions and other employee benefit plans, together with financial management reports and statistical information. Services functions are carried out through regional and district offices in Canada and abroad.

The minister of supply and services is also the Receiver General for Canada and reports to Parliament for Canadian Arsenals Ltd., Crown Assets Disposal Corp., the Royal Canadian Mint, the Office of the Custodian and Statistics Canada.

**Tariff Board.** Constituted in 1931, the board derives its duties and powers from five statutes: the Tariff Board Act (RSC 1970, c.T-1); the Customs Act (RSC 1970, c.C-40); the Excise Tax Act (RSC 1970, c.E-13); the Anti-dumping Act (RSC 1970, c.A-15) and the Petroleum Administration Act.

Under the Tariff Board Act, the board looks into and reports on any matter in relation to goods that, if brought into Canada, are subject to or exempt from customs duties or excise taxes. Reports of the board are tabled in Parliament by the minister of finance. It is also the duty of the board to inquire into any other matter in relation to trade and commerce that may be referred to it by the Governor-in-Council.

Under the provisions of the Customs Act, the Excise Tax Act and the Anti-dumping Act, the Tariff Board acts as a court to hear appeals from decisions on customs and excise rulings by the national revenue department in respect of excise taxes, tariff classification, value for duty, drawback of customs duties and determination of normal value or export price in dumping matters. Under the provisions of the Petroleum Administration Act, the Tariff Board acts as a court to hear appeals from decisions by the National Energy Board on any charges payable in the exportation of oil, and decisions by the Petroleum Compensation Board on any charges payable on any petroleum or petroleum product. Declarations of the board on appeals are final and conclusive but the acts contain provisions for appeal on

questions of law to the Federal Court and thence to the Supreme Court of Canada.

**Tax Court of Canada.** established under the provisions of the Tax Court of Canada Act, SC 1980-81-82-83, c.158, came into existence in July 1983 and replaced the Tax Review Board. The court has jurisdiction to hear and determine appeals to the court on matters arising under the Income Tax Act, the Canada Pension Plan, the Petroleum and Gas Revenue Tax Act and Part IV of the Unemployment Insurance Act, 1971. Hearings are held in major centres throughout the country. All parties to an appeal may appear in person or may be represented by counsel or an agent.

**Telefilm Canada.** This corporation, formerly known as the Canadian Film Development Corp., was established by an act of Parliament in March 1967 (RSC 1970, c.C-8). It has administered the Canadian broadcast program development fund since 1983, making the corporation the federal government agency responsible for private sector development in both the television production and film industries. The corporation invests directly in production, provides loans to producers, co-ordinates official participation in festivals and marketplaces, and provides advice and assistance in distribution and administrative matters. It co-operates with other federal and provincial departments and agencies having like interests and is financed by a yearly appropriation from Parliament. The corporation, under the jurisdiction of the minister of communications, is headed by a board of directors and a chairman appointed by the Governor-in-Council. Headquarters of Telefilm Canada is in Montréal with offices in Toronto and Vancouver.

**Teleglobe Canada.** Created in 1950 by an act of Parliament (RSC 1970, c.C-11), under the name of the Canadian Overseas Telecommunication Corp., this Crown agency operates all overseas communications to and from Canada — whether by undersea cable or international satellite. By means of international switching-centres in Montréal, Toronto and Vancouver, Teleglobe Canada provides public telephone service to over 200 overseas territories. The corporation also provides public message telegraph service, telex, private wire service, data and video transmissions to many points around the world. Teleglobe Canada is the designated operating entity for Canadian participation in the International Telecommunications Satellite organization (INTELSAT) and International Maritime Satellite (INMARSAT) and represents Canada on the Commonwealth Telecommunications Council. It reports to Parliament through the minister of state for social development.

**Telesat Canada.** Telesat Canada was incorporated in 1969 by an act of Parliament (RSC 1970, c.T-4) to establish and operate a domestic satellite telecommunication system. It is a commercial venture whose ownership is shared by Canadian telecommunications carriers and the federal government, with possible public participation. It provides telecommunications services for the transmission of television, radio, telephone, teletype and data communications through a microwave link between earth stations and satellites in orbit. Its annual report is tabled in the House of Commons by the minister of communications.

**Textile and Clothing Board.** This board was established (SC 1971, c.39) to receive complaints and conduct inquiries about textile and clothing goods imported into Canada under such conditions as to cause or threaten serious injury to Canadian production. After its investigative procedures are completed, the board makes written recommendations to the minister of regional industrial expansion. The board consists of three members appointed by the Governor-in-Council and maintains its head office in the Ottawa region.

**Transport, Department of (Transport Canada).** The department is a corporate structure which includes Crown corporations with varying degrees of autonomy and groups responsible for operations, review, co-ordination, planning and development, plus central services.

The Canadian air transportation administration provides and operates domestic and trans-oceanic air traffic control services and airway facilities and a national air terminal system. It is responsible for providing and maintaining air traffic control and air navigational services and telecommunications and electronics systems, and for licensing and certification of aviation personnel, commercial operators and aircraft. The administration owns 143 and operates 96 of the 594 licensed land airports in Canada.

The Canadian marine transportation administration co-ordinates administration and management of federal marine way and terminal activities through the Canadian Coast Guard, the Canada Ports Corp., the St. Lawrence Seaway Authority, the Atlantic, Laurentian, Great Lakes and Pacific pilotage authorities, and nine harbour commissions. It directly administers some 360 public harbours and ports, while the Canada Ports Corp. (formerly the National Harbours Board) operates 15 major ports, with nine others being administered by harbour commissions. The St. Lawrence Seaway Authority, in conjunction with its United States counterpart, operates and maintains a deep waterway between the port of Montréal and Lake Erie. Pilotage services are provided by each of the authorities in their geographic zones. Coast guard activities include icebreaking, search and rescue, aids to navigation, marine pollution surveillance and emergency clean-up, Arctic resupply, main channel dredging and shore protection, and ship/shore communications and traffic services. The coast guard is also responsible for ship safety regulation, inspection and casualty investigation, the certification of ships' personnel, and the protection of navigable waters.

The Canadian surface transportation administration is responsible for federal involvement in railways, motor vehicle safety, highways, urban transportation and ferries.

A review group conducts studies and evaluations of departmental operations and provides for independent audits of personnel and finance operations, including the development and co-ordination of management information systems and policies. A co-ordinating group advises on departmental policy and maintains intergovernmental, interdepartmental and external liaison related to Transport Canada activities, Arctic transportation and the transport of dangerous goods. A strategic planning group provides guidance for long-term planning and includes a research and development component. There is a Transport Canada research and development centre in Montréal.

Four autonomous Crown corporations, Air Canada, Canadian National Railways, VIA Rail Inc. and the Northern Transportation Co. Ltd. report to Parliament through the minister of transport.

**Treasury Board** (Treasury Board of Canada). The board was established as a committee of the Queen's Privy Council for Canada by order-in-council PC 3 of July 2, 1867, and was made a statutory committee in 1869. The minister of finance was appointed chairman of the board, with four other privy councillors to be designated as members by the Governor-in-Council. The secretary of the board and the members of his staff were employed by the finance department.

By the Government Organization Act, 1966 (SC 1966, c.25) the secretariat was established as a separate department of government with its own minister, the president of the board. The committee constituting the board includes, in addition to the president, the minister of finance and four other privy councillors.

The Financial Administration Act (RSC 1970, c.F-10) defines the board's responsibilities as the central management agency of government. These responsibilities include the organization of the public service, financial management, annual and longer-term expenditure planning, and expenditure control, including allocation of resources among departments and agencies of government; management of personnel functions in the public service; and improvement in the efficiency of management and administration in the public service.

To meet these responsibilities, the board has two administrative arms: the Treasury Board secretariat and the office of the comptroller general. The Treasury Board secretariat has four branches: administrative policy, official languages, personnel policy and program. The office of the comptroller general, created in 1978, has three branches: policy development, program evaluation and management practices.

**Umpire, Office of the.** This office was established to provide administrative support and administrative services to the umpires (12) constituted under the Unemployment Insurance Act as an independent judicial authority to hear and determine appeals against boards of referees decisions in unemployment insurance matters. The chief umpire is the associate chief justice of the Federal Court of Canada. The office of the umpire is in Ottawa.

**Uranium Canada, Ltd.** This company was incorporated in June 1971 under the Canada Corporations Act (RSC 1970, c.C-32) pursuant to the Appropriation Act No. 1, 1971, and the Atomic Energy Control Act, (RSC 1970, c.A-19). The corporation was continued under the Canada Business Corporations Act by certificate of continuance in November 1980. Objects of the corporation are to negotiate, execute and perform agreements for the purchase, stockpiling and sale of uranium concentrates and to do anything necessary or incidental thereto, subject to the approval of the Governor-in-Council. The company has been dormant since May 1981 when the assets it was administering for Canada, the general stockpile of uranium concentrates, were transferred to Eldorado Nuclear Ltd.

**Veterans Affairs, Department of** (Veterans Affairs Canada). This department, established in 1944 (RSC 1970,

c.V-1), is concerned exclusively with the well-being of veterans, their dependents and certain civilians. The department provides treatment services (hospital, medical, dental and prosthetic), counselling services, education assistance, life insurance, and land settlement and home construction assistance. The department operates a hospital and two veterans homes, maintains contract beds in hospitals across Canada and has administrative offices in the larger cities.

The Canadian Pension Commission, the War Veterans Allowance Board, the Bureau of Pensions Advocates, the Pension Review Board and the Army Benevolent Fund Board report to Parliament through the minister of veterans affairs.

**VIA Rail Canada, Inc.** became a Crown corporation, in April 1978. The corporation is financed by the federal government. It provides, manages and operates all passenger railway services in Canada with the exception of commuter trains and operates a network of train services covering Canada from coast to coast. These services range from the transcontinental trains to the fast intercity trains serving parts of Eastern Canada. VIA's fleet of vehicle equipment includes conventional coaches, sleeping cars, meal service cars, and ultramodern LRC (light, rapid, comfortable) trains. VIA Rail took over the marketing function in June 1977 and became totally responsible for the management of CN and CP rail's passenger services in April 1979. The corporation consists of a board of directors composed of three to 15 members including a chairman, president and chief executive officer. Head offices are in Montréal and the corporation reports to the minister of transport.

**War Veterans Allowance Board.** This board, established under the authority of the War Veterans Allowance Act, is a quasi-judicial body of eight full-time members, including a chairman and deputy chairman, appointed by the Governor-in-Council. It is independent as far as its decisions are concerned and reports to Parliament through the minister of veterans affairs. It is administratively co-ordinated with the department of veterans affairs which provides support services. The board has responsibility, under the War Veterans Allowance Act and Part XI of the Civilian War Pensions and Allowances Act, to act as a court of appeal for aggrieved applicants and recipients; to review decisions of the district authorities to ensure that adjudication is consistent with the intent and purview of the legislation and that the legislation is applied uniformly throughout Canada; to adjudicate pursuant to specific sections of the acts where the board has sole jurisdiction; to provide interpretation of the acts and regulations, and to advise the minister on regulations under the acts. The board also issues precedent decisions which continuously refine the jurisprudence related to the legislation.

**Youth, Minister of State for.** The federal government appointed its first minister of state for youth in January 1984. The minister's mandate is to work with the secretary of state and the minister of employment and immigration as they carry out their functions with regard to youth. The minister represents the views of young people during cabinet deliberations and is responsible for three programs:

International Year of Youth in 1985 (secretary of state), and Summer Canada and International Exchange Programs (employment and immigration), with staff support in the youth bureau (employment and immigration) and the youth secretariat (secretary of state).

**Yukon Territory Water Board.** The Northern Inland Waters Act, which came into effect in 1972, established the Yukon Territory Water Board whose objects are to provide for conserving, developing and using the water resources of

Yukon for the optimum benefit of all Canadians and residents of Yukon in particular. The board licenses water users. The licences contain terms and conditions regulating the quantity of water to be used and the quality of waste water returned to the environment.

The board consists of nine members. Six are private citizens including three nominated by the commissioner-in-council of Yukon and three appointed by the minister of Indian affairs and northern development. Three are federal government members also appointed by the minister.



## APPENDIX 2

---

# FEDERAL LEGISLATION

List of public general acts of the first session of the 32nd Parliament, April 14, 1980 to November 30, 1983, passed in the 29th, 30th, 31st and 32nd years of the reign of Her Majesty Queen Elizabeth II, and the second session of the 32nd Parliament, December 7, 1983 to July 9, 1984, passed in the 32nd and 33rd years of the reign of her Majesty Queen Elizabeth II. For further details the reader should refer to the *Statutes of Canada*, 1980-81-82-83 and subsequent editions. The date of royal assent follows each chapter number.

### First session, 32nd Parliament

Chapter 1 (May 7, 1980) An Act to amend the Immigration Act, 1976.

Chapter 2 (May 7, 1980) An Act to repeal The Canada-France Trade Agreement Act, 1933 and The Supplementary Canada-France Trade Agreement Act, 1935.

Chapter 3 (May 16, 1980) Appropriation Act No. 1, 1980-81 grants to Her Majesty certain sums of money for the public service for the financial year ending the 31st March, 1981.

Chapter 4 (June 5, 1980) An Act to amend the Old Age Security Act.

Chapter 5 (June 27, 1980) An Act respecting the national anthem of Canada.

Chapter 6 (June 27, 1980) An Act to amend the Small Businesses Loans Act.

Chapter 7 (June 27, 1980) An Act to amend the Farm Improvement Loans Act.

Chapter 8 (June 27, 1980) An Act to amend an Act to provide for the appointment of a Port Warden for the Harbour of Quebec and to amend an Act to amend and consolidate the Acts relating to the office of Port Warden for the Harbour of Montréal.

Chapter 9 (June 27, 1980) An Act to implement the International Convention for Safe Containers.

Chapter 10 (June 27, 1980) An Act to amend the Federal Business Development Bank Act.

Chapter 11 (June 27, 1980) An Act to amend the Fisheries Improvement Loans Act.

Chapter 12 (July 10, 1980) An Act to amend the Bank Act and the Quebec Savings Banks Act.

Chapter 13 (July 10, 1980) An Act to amend the Employment Tax Credit Act.

Chapter 14 (July 10, 1980) An Act to amend the Regional Development Incentives Act.

Chapter 15 (July 10, 1980) An Act to amend the Saltfish Act.

Chapter 16 (July 10, 1980) An Act to amend the Livestock Feed Assistance Act.

Chapter 17 (July 10, 1980) An Act to adjust the Accounts of Canada and to make related amendments to certain Acts.

Chapter 18 (July 17, 1980) An Act to provide supplementary borrowing authority for the fiscal year 1980-81.

Chapter 19 (July 17, 1980) An Act to amend the Pension Act, the Compensation for Former Prisoners of War Act, the War Veterans Allowances Act and the Civilian War Pensions and Allowances Act.

Chapter 20 (July 17, 1980) An Act to amend the Bretton Woods Agreements Act.

Chapter 21 (July 17, 1980) An Act to change the name of the electoral district of Saint-Hyacinthe to Saint-Hyacinthe-Bagot.

Chapter 22 (July 17, 1980) An Act to change the name of the electoral district of Sarnia to Sarnia-Lambton.

Chapter 23 (July 17, 1980) An Act to change the name of the electoral district of Rimouski to Rimouski-Temiscouata.

Chapter 24 (July 17, 1980) An Act to change the name of the electoral district of Hastings-Frontenac to Hastings-Frontenac-Lennox and Addington.

Chapter 25 (July 17, 1980) An Act to change the name of the electoral district of Notre-Dame-de-Grâce to Notre Dame de Grâce-Lachine East.

Chapter 26 (July 17, 1980) An Act to change the name of the electoral district of Berthier-Maskinongé to Berthier-Maskinongé-Lanaudière.

Chapter 27 (July 17, 1980) An Act to change the name of the electoral district of Cochrane to Cochrane-Superior.

Chapter 28 (July 17, 1980) An Act to change the name of the electoral district of Argenteuil to Argenteuil-Papineau.

Chapter 29 (July 17, 1980) An Act to change the name of the electoral district of Verdun to Verdun-Saint Paul.

Chapter 30 (July 17, 1980) An Act to change the name of the electoral district of Sainte-Marie to Montréal-Sainte Marie.

Chapter 31 (July 17, 1980) An Act to change the name of the electoral district of Mercier to Montréal-Mercier.

Chapter 32 (July 17, 1980) An Act to change the name of the electoral district of Richmond to Richmond-Wolfe.

Chapter 33 (July 17, 1980) An Act to change the name of the electoral district of Montmorency to Montmorency-Orléans.

Chapter 34 (July 17, 1980) An Act to change the name of the electoral district of Laprairie to La Prairie.

Chapter 35 (July 17, 1980) An Act to amend the Unemployment Insurance Act, 1971.

Chapter 36 (July 17, 1980) An Act to promote public safety in the transportation of dangerous goods.

Chapter 37 (July 17, 1980) An Act respecting grants to municipalities, provinces and other bodies exercising functions of local government that levy real property taxes.

Chapter 38 (July 17, 1980) An Act to implement an agreement between Her Majesty in right of the Province of British Columbia and Her Majesty in right of Canada respecting the sharing of revenues from the exploitation of minerals in the Fort Nelson Indian Reserve.

Chapter 39 (July 17, 1980) An Act to provide for the imposition of certain economic sanctions against the Islamic Republic of Iran.

Chapter 40 (November 26, 1980) An Act to revise the Bank Act, to amend the Quebec Savings Banks Act and the Bank of Canada Act, to establish the Canadian Payments Association and to amend other Acts in consequence thereof.

Chapter 41 (December 11, 1980) Appropriation Act No. 2, 1980-81 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending March 31, 1981.

Chapter 42 (December 11, 1980) Appropriation Act No. 3, 1980-81 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending March 31, 1981.

Chapter 43 (December 17, 1980) An Act to amend the Small Loans Act and to provide for its repeal and to amend the Criminal Code.

Chapter 44 (December 17, 1980) An Act to implement conventions between Canada and Spain, Canada and the Republic of Liberia, Canada and the Republic of Austria, Canada and Italy, Canada and the Republic of Korea, Canada and the Socialist Republic of Romania and Canada and the Republic of Indonesia and agreements between Canada and Malaysia, Canada and Jamaica and Canada and Barbados and a convention between Canada and the United Kingdom of Great Britain and Northern Ireland for the avoidance of double taxation with respect to income tax.

Chapter 45 (December 17, 1980) An Act to amend the Clean Air Act.

Chapter 46 (February 19, 1981) An Act to amend laws relating to fiscal transfers to the provinces.

Chapter 47 (February 19, 1981) An Act to correct certain anomalies, inconsistencies, archaisms, errors and other matters of a non-controversial and uncomplicated nature in the Revised Statutes of Canada, 1970, and other Acts subsequent to 1970.

Chapter 48 (February 26, 1981) An Act to amend the statute law relating to income tax.

Chapter 49 (March 18, 1981) An Act to amend the Canada Student Loans Act.

Chapter 50 (March 18, 1981) An Act to amend the Judges Act and certain other Acts in consequence thereof.

Chapter 51 (March 31, 1981) Appropriation Act No. 4, 1980-81 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1981.

Chapter 52 (March 31, 1981) Appropriation Act No. 1, 1981-82 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1982.

Chapter 53 (April 8, 1981) An Act to provide supplementary borrowing authority.

Chapter 54 (April 23, 1981) An Act to establish the Canada Post Corporation, to repeal the Post Office Act and other related Acts and to make related amendments to other Acts.

Chapter 55 (April 23, 1981) An Act to amend the Auditor General Act.

Chapter 56 (April 23, 1981) An Act to implement conventions between Canada and New Zealand and Canada and Australia for the avoidance of double taxation with respect to income tax.

Chapter 57 (June 30, 1981) An Act respecting a home insulation program for certain provinces in Canada.

Chapter 58 (June 30, 1981) An Act respecting a home insulation program for certain Maritime provinces in Canada.

Chapter 59 (June 30, 1981) An Act respecting oil conservation and the substitution for oil of other energy sources.

Chapter 60 (June 30, 1981) An Act to amend the Department of Labour Act.

Chapter 61 (June 30, 1981) An Act to provide for the prohibition of certain international air services.

Chapter 62 (June 30, 1981) An Act to amend the Canadian and British Insurance Companies Act.

Chapter 63 (June 30, 1981) An Act to amend the Currency and Exchange Act.

Chapter 64 (June 30, 1981) An Act to amend the Public Service Superannuation Act and the Supplementary Retirement Benefits Act in respect of the early retirement of air traffic controllers.

Chapter 65 (June 30, 1981) An Act respecting the relocation of government agencies.

Chapter 66 (June 30, 1981) Appropriation Act No. 2, 1981-82 grants to Her Majesty certain sums of money for the public service for the financial year ending the 31st March, 1982.

Chapter 67 (July 8, 1981) An Act to amend the Customs Tariff and to repeal the Irish Free State Trade Agreement Act, 1932, the Union of South Africa Trade Agreement Act, 1932 and the United Kingdom Trade Agreement Act, 1937.

Chapter 68 (July 8, 1981) An Act to amend the Excise Tax Act and the Excise Act and to provide for a revenue tax in respect of petroleum and gas.

Chapter 69 (July 8, 1981) An Act to amend the Animal Disease and Protection Act.

Chapter 70 (July 8, 1981) An Act to amend the International Development Association Act.

Chapter 71 (July 8, 1981) An Act to amend the National Housing Act.

Chapter 72 (July 8, 1981) An Act to amend the Atlantic Region Freight Assistance Act.

Chapter 73 (July 8, 1981) An Act to authorize financial assistance to be provided to certain international financial institutions.

Chapter 74 (July 10, 1981) An Act to amend the Diplomatic and Consular Privileges and Immunities Act.

Chapter 75 (July 10, 1981) An Act to amend the Official Residences Act.

Chapter 76 (July 10, 1981) An Act to amend the Pension Act and the Compensation for Former Prisoners of War Act.

Chapter 77 (July 10, 1981) An Act to amend the Senate and House of Commons Act, the Salaries Act, the Parliamentary Secretaries Act and the Members of Parliament Retiring Allowances Act.

Chapter 78 (July 10, 1981) An Act to amend the Veterans' Land Act and to amend the Veterans Benefit Act in consequence thereof.

Chapter 79 (July 10, 1981) An Act to amend the Corporations and Labour Unions Returns Act.

Chapter 80 (December 18, 1981) An Act to amend the National Energy Board Act.

Chapter 81 (December 18, 1981) An Act to regulate oil and gas interests in Canada lands and to amend the Oil and Gas Production and Conservation Act.

Chapter 82 (December 18, 1981) An Act to regulate the importation into Canada of fresh, chilled and frozen

meat and to amend the Export and Import Permits Act.

Chapter 83 (December 18, 1981) An Act to amend the Small Businesses Loans Act (No. 2).

Chapter 84 (December 18, 1981) An Act to amend the National Energy Board Act (No. 2).

Chapter 85 (December 18, 1981) An Act to incorporate the Jules and Paul-Émile Léger Foundation.

Chapter 86 (December 18, 1981) Appropriation Act No. 3, 1981-82 grants to Her Majesty certain sums of money for the public service for the financial year ending the 31st March, 1982.

Chapter 87 (March 31, 1982) An Act relating to the inspection of electric and gas meters and supplies.

Chapter 88 (March 31, 1982) An Act to amend the Pest Control Products Act.

Chapter 89 (March 31, 1982) An Act to provide for the payment of benefits to laid-off employees and to amend the Canada Labour Code.

Chapter 90 (March 31, 1982) Appropriation Act No. 4, 1981-82 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1982.

Chapter 91 (March 31, 1982) Appropriation Act No. 1, 1982-83 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1983.

Chapter 92 (April 7, 1982) An Act respecting loans to farmers.

Chapter 93 (April 7, 1982) An Act to amend the National Housing Act and the Canada Mortgage and Housing Corporation Act.

Chapter 94 (April 7, 1982) An Act to amend the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977 and to provide for payments to certain provinces.

Chapter 95 (June 3, 1982) An Act to provide for state immunity in Canadian courts.

Chapter 96 (June 3, 1982) An Act to amend the Canada Elections Act.

Chapter 97 (June 3, 1982) An Act to amend the Unemployment Insurance Act, 1971 (No. 2).

Chapter 98 (June 17, 1982) An Act to provide supplementary borrowing authority.

Chapter 99 (June 17, 1982) An Act to amend the Criminal Code.

Chapter 100 (June 22, 1982) An Act to provide for the garnishment or attachment of Her Majesty in right of Canada and for the diversion of pension benefits payable by Her Majesty in right of Canada under certain enactments.

Chapter 101 (June 22, 1982) An Act to amend the Supplementary Retirement Benefits Act.

Chapter 102 (June 22, 1982) An Act to amend certain Acts that provide for the retention of records.

Chapter 103 (June 22, 1982) Appropriation Act No. 2, 1982-83 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1983.

Chapter 104 (June 29, 1982) An Act to amend the statute law relating to certain taxes.

Chapter 105 (June 29, 1982) An Act to amend the Petro-Canada Act.

Chapter 106 (June 29, 1982) An Act to amend the Department of Energy, Mines and Resources Act.

Chapter 107 (June 29, 1982) An Act respecting petroleum incentives and Canadian ownership and control determination and to amend the Foreign Investment Review Act.

Chapter 108 (July 7, 1982) An Act to establish the Cooperative Energy Corporation and the Cooperative Energy Development Corporation.

Chapter 109 (July 7, 1982) An Act to establish a national program for occupational training.

Chapter 110 (July 7, 1982) An Act respecting young offenders and to repeal the Juvenile Delinquents Act.

Chapter 111 (July 7, 1982) An Act to enact the Access to Information Act and the Privacy Act, to amend the Federal Court Act and the Canada Evidence Act, and to amend certain other Acts in consequence thereof.

Chapter 112 (July 7, 1982) An Act respecting energy monitoring and to amend the Energy Supplies Emergency Act, 1979 and the Oil Substitution and Conservation Act.

Chapter 113 (July 7, 1982) An Act respecting motor vehicle fuel consumption standards.

Chapter 114 (July 7, 1982) An Act to amend the Petroleum Administration Act and to enact provisions related thereto.

Chapter 115 (July 7, 1982) An Act to amend the Canada Business Corporations Act.

Chapter 116 (July 7, 1982) An Act to amend the National Energy Board Act (No. 3).

Chapter 117 (August 4, 1982) An Act to amend the Railway Act.

Chapter 118 (August 4, 1982) An Act to amend the Small Businesses Loans Act (No. 3).

Chapter 119 (August 4, 1982) An Act to provide for payments to persons in respect of dwellings insulated with urea formaldehyde foam insulation.

Chapter 120 (August 4, 1982) An Act to provide supplementary borrowing authority.

Chapter 121 (August 4, 1982) An Act to amend the National Harbours Board Act, the Government Harbours and Piers Act, the Harbour Commissions Act, the Canada Shipping Act and the Fishing and Recreational Harbours Act.

Chapter 122 (August 4, 1982) An Act respecting compensation in the public sector of Canada.

Chapter 123 (August 4, 1982) An Act to amend the Financial Administration Act (No. 2).

Chapter 124 (October 27, 1982) An Act to amend the Holidays Act.

Chapter 125 (October 27, 1982) An Act to amend the Criminal Code in relation to sexual offences and other offences against the person and to amend certain other Acts in relation thereto or in consequence thereof.

Chapter 126 (November 4, 1982) An Act to provide for the resumption and continuation of longshoring and related operations at ports on the west coast of Canada.

Chapter 127 (November 8, 1982) An Act to provide supplementary borrowing authority (No. 2).

Chapter 128 (December 16, 1982) An Act to amend the Bretton Woods Agreements Act and the International Development Association Act.

Chapter 129 (December 16, 1982) An Act to amend the Customs Tariff and to repeal certain Acts in consequence thereof.

Chapter 130 (December 16, 1982) An Act to amend the National Housing Act (No. 2).

Chapter 131 (December 16, 1982) An Act respecting rebates of interest on farm loans made under the Farm Credit Act.

Chapter 132 (December 16, 1982) Appropriation Act No. 3, 1982-83 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1983.

Chapter 133 (January 31, 1983) An Act to amend the Canada Agricultural Products Standards Act.

Chapter 134 (January 31, 1983) An Act to change the name of the electoral district of Missisquoi to Brome-Missisquoi.

Chapter 135 (January 31, 1983) An Act to change the name of the electoral district of Saint-Michel to Saint-Michel-Ahuntsic.

Chapter 136 (January 31, 1983) An Act to amend the Supplementary Retirement Benefits Act (No. 2).

Chapter 137 (February 15, 1983) An Act to change the name of the electoral district of Dauphin to Dauphin-Swan River.

Chapter 138 (February 15, 1983) An Act to amend the Old Age Security Act (No. 2).

Chapter 139 (February 17, 1983) An Act to amend the Family Allowances Act, 1973.

Chapter 140 (March 30, 1983) An Act to amend the statute law relating to income tax (No. 2).

Chapter 141 (March 30, 1983) An Act to amend the Small Businesses Loans Act (No. 4).

Chapter 142 (March 30, 1983) An Act to authorize continuing financial assistance to be provided to certain international financial institutions.

Chapter 143 (March 30, 1983) An Act to amend the Canadian Human Rights Act and to amend certain other Acts in consequence thereof.

Chapter 144 (March 30, 1983) An Act to provide supplementary borrowing authority.

Chapter 145 (March 30, 1983) Appropriation Act No. 4, 1982-83 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1983.

Chapter 146 (March 30, 1983) Appropriation Act No. 1, 1983-84 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1984.

Chapter 147 (April 27, 1983) An Act respecting Small Business Investment Grants.

Chapter 148 (April 27, 1983) An Act to amend the Canada Deposit Insurance Corporation Act.

Chapter 149 (June 3, 1983) An Act to amend the Unemployment Insurance Act, 1971 (No. 3).

Chapter 150 (June 3, 1983) An Act to amend the Salaries Act.

Chapter 151 (June 29, 1983) An Act to provide supplementary borrowing authority.

Chapter 152 (June 29, 1983) An Act to establish a corporation called Canagrex to promote, facilitate and engage in the export of agricultural and food products from Canada.

Chapter 153 (June 29, 1983) An Act to amend the Farm Improvement Loans Act (No. 2).

Chapter 154 (June 29, 1983) An Act to amend the Fisheries Improvement Loans Act (No. 2).

Chapter 155 (June 29, 1983) An Act to amend the Canada Student Loans Act (No. 2).

Chapter 156 (June 29, 1983) An Act to implement an agreement between Canada and the Federal Republic of Germany for the avoidance of double taxation with respect to taxes on income and certain other taxes.

Chapter 157 (June 29, 1983) An Act to amend the Judges Act and the Federal Court Act.

Chapter 158 (June 29, 1983) An Act respecting the Tax Court of Canada and to amend the Federal Court Act, the Judges Act and the Unemployment Insurance Act, 1971.

Chapter 159 (June 29, 1983) An Act to repeal certain Statutes that have ceased to be in force or have become unnecessary.

Chapter 160 (June 29, 1983) An Act to provide for financial assistance for industrial development in all regions of Canada.

Chapter 161 (June 29, 1983) An Act to provide for government operated pool systems on combinations of athletic contests and events to amend the Criminal Code and the Income Tax Act.

Chapter 162 (June 29, 1983) Appropriation Act No. 2, 1983-84 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1984.

Chapter 163 (October 19, 1983) An Act to amend the Export Development Act.

Chapter 164 (November 17, 1983) An Act to amend the Canada Elections Act (No. 3).

Chapter 165 (November 17, 1983) An Act to establish the Canadian Aviation Safety Board and to amend certain Acts in consequence thereof.

Chapter 166 (November 17, 1983) An Act to amend the Bretton Woods Agreements Act (No. 2).

Chapter 167 (November 17, 1983) An Act respecting the organization of the Government of Canada and matters related or incidental thereto.

Chapter 168 (November 17, 1983) An Act to facilitate the transportation, shipping and handling of western grain and to amend certain Acts in consequence thereof.

Chapter 169 (November 30, 1983) An Act to amend the Labour Adjustment Benefits Act and to authorize certain payments in relation thereto.

Chapter 170 (November 30, 1983) An Act to amend the Financial Administration Act.

Chapter 171 (November 30, 1983) An Act to amend the Garnishment, Attachment and Pension Diversion Act.

Chapter 172 (November 30, 1983) An Act to authorize investment in and the provision of financial assistance to the Atlantic Fisheries for the purpose of restructuring fishery enterprises.

Chapter 173 (November 30, 1983) Appropriation Act No. 3, 1983-84 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1984.

### Second session, 32nd Parliament

Chapter 1 (January 19, 1984) An Act to amend the statute law relating to income tax and to make related amendments to the Canada Pension Plan and the Unemployment Insurance Act, 1971.

Chapter 2 (February 23, 1984) An Act to provide for the settlement of claims by Indian bands in British Columbia relating to certain lands cut off from their reserves.

Chapter 3 (March 29, 1984) Appropriation Act No. 4, 1983-84 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1984.

Chapter 4 (March 29, 1984) Appropriation Act No. 1, 1984-85 grants to Her Majesty certain sums of money for

the Government of Canada for the financial year ending the 31st March, 1985.

Chapter 5 (April 5, 1984) An Act to provide borrowing authority.

Chapter 6 (April 17, 1984) An Act relating to cash contributions by Canada in respect of insured health services provided under provincial health care insurance plans and amounts payable by Canada in respect of extended health care services and to amend and repeal certain Acts in consequence thereof.

Chapter 7 (June 7, 1984) An Act to amend the Prairie Grain Advance Payments Act.

Chapter 8 (June 7, 1984) An Act to amend the Coastal Fisheries Protection Act.

Chapter 9 (June 7, 1984) An Act to amend the Currency and Exchange Act.

Chapter 10 (June 7, 1984) An Act to amend the Yukon Quartz Mining Act.

Chapter 11 (June 7, 1984) An Act to implement a treaty between Canada and the United States relating to the Skagit River and Ross Lake, and the Seven Mile Reservoir on the Pend d'Oreille River.

Chapter 12 (June 7, 1984) An Act to establish the Asia-Pacific Foundation of Canada.

Chapter 13 (June 7, 1984) An Act to amend the Federal-Provincial Fiscal Arrangements and Established Programs Financing Act, 1977.

Chapter 14 (June 7, 1984) An Act to change the name of the electoral district of Hull to Hull-Aylmer.

Chapter 15 (June 7, 1984) An Act to amend the Senate and House of Commons Act.

Chapter 16 (June 7, 1984) Appropriation Act No. 2, 1984-85 grants to Her Majesty certain sums of money for the Government of Canada for the financial year ending the 31st March, 1985.

Chapter 17 (June 14, 1984) An Act to apply the customs and excise jurisdiction of Canada to the continental shelf of Canada and to amend certain Acts in relation thereto or in consequence thereof.

Chapter 18 (June 14, 1984) An Act respecting certain provisions of the James Bay and Northern Quebec Agreement and the Northeastern Quebec Agreement relating principally to Cree and Naskapi local government and to the land regime governing Category 1A and Category 1A—N land.

Chapter 19 (June 14, 1984) An Act to amend the War Veterans Allowance Act, the Civilian War Pensions and Allowances Act and certain other Acts in relation thereto.

Chapter 20 (June 28, 1984) An Act to implement a convention between Canada and the United States with respect to taxes on income and on capital.

Chapter 21 (June 28, 1984) An Act to establish the Canadian Security Intelligence Service, to enact An Act respecting enforcement in relation to certain security and related offences and to amend certain Acts in consequence thereof or in relation thereto.

Chapter 22 (June 28, 1984) An Act to amend the Customs Tariff.

Chapter 23 (June 28, 1984) An Act to amend the Radiation Emitting Devices Act.

Chapter 24 (June 28, 1984) An Act to improve, give effect to and declare valid the Agreement between the Committee for Original Peoples' Entitlement, representing the Inuvialuit of the Inuvialuit Settlement Region, and the Government of Canada and to amend the National Parks Act in consequence thereof.

Chapter 25 (June 28, 1984) An Act respecting the imposition of anti-dumping and countervailing duties, to amend the Currency and Exchange Act, the Customs Tariff and the Export and Import Permits Act and to repeal the Anti-dumping Act.

Chapter 26 (June 28, 1984) An Act to amend the National Housing Act.

Chapter 27 (June 28, 1984) An Act to amend the Old Age Security Act.

Chapter 28 (June 28, 1984) An Act to establish standards for the manufacture of the national flag of Canada.

Chapter 29 (June 29, 1984) An Act respecting the Canada-Nova Scotia Agreement on Offshore Oil and Gas Resource Management and Revenue Sharing and to make related and consequential amendments.

Chapter 30 (June 29, 1984) An Act to amend the Bank Act.

Chapter 31 (June 29, 1984) An Act to amend the Financial Administration Act in relation to Crown corporations and to amend other Acts in consequence thereof.

Chapter 32 (June 29, 1984) An Act to implement a convention between Canada and the United Kingdom of Great Britain and Northern Ireland providing for the reciprocal recognition and enforcement of judgments in civil and commercial matters.

Chapter 33 (June 29, 1984) An Act to amend the Public Service Superannuation Act.

Chapter 34 (June 29, 1984) An Act to establish a National Park on the Mingan Archipelago.

Chapter 35 (June 29, 1984) An Act to implement conventions between Canada and the Republic of Tunisia, Canada and the People's Republic of Bangladesh, Canada and the United Republic of Cameroon and Canada and the Democratic Socialist Republic of Sri Lanka, an agreement between Canada and Kenya and conventions between Canada and the Arab Republic of Egypt, Canada and the Republic of the Ivory Coast and Canada and Sweden for

the avoidance of double taxation with respect to income tax.

Chapter 36 (June 29, 1984) An Act to grant access to records of the Special Committee on the Defence of Canada Regulations.

Chapter 37 (June 29, 1984) An Act to establish the Canadian Institute for International Peace and Security.

Chapter 38 (June 29, 1984) An Act to amend the Western Grain Stabilization Act.

Chapter 39 (June 29, 1984) An Act to amend the Canada Labour Code and the Financial Administration Act.

Chapter 40 (June 29, 1984) An Act to correct certain anomalies, inconsistencies, archaisms and errors and to deal with other matters of a non-controversial and uncomplicated nature in the Statutes of Canada.



## APPENDIX 3

# ECONOMIC CHRONOLOGY JUNE 1980 - MAY 1984

This chronology is drawn from the publication *Current economic analysis*, Statistics Canada 13-004, produced in the Current Economic Analysis Division of Statistics Canada, Ottawa. The section on news developments provides a summary of events reflecting changes in macro-economic conditions.

The chronology includes not only Canadian news items, but also others dealing with the European Economic Community (EEC), Organization for Economic Co-operation and Development (OECD), Organization of Petroleum Exporting Countries (OPEC), the Federal Reserve Board (FRB) of the United States, the General Agreement on Tariffs and Trade (GATT), financial institutions, corporations and events in other countries with effect on the economy of Canada.

### June 1980

*June 5*, The National Bureau of Economic Research in New York declared that the US had entered a recession in January.

*June 11*, Ford Motor Co. of Detroit introduced new sub-compact model cars, claimed to have better Environmental Protection Agency (EPA) fuel economy ratings than any other 1981 compact model; Ford is hoping that their new models will reduce the import share of the North American market (currently 27% in the US and 16% in Canada); Canadian production of the new Fords was to begin in the spring of 1981.

*June 13*, The Federal Reserve Board of the United States lowered its discount rate from 12% to 11%; this was the second 1% reduction in less than a month.

*June 17*, A province-wide strike by 12,000 carpenters halted all construction projects in southwestern Ontario outside of Toronto; other building trades were allowed to continue work in Toronto.

*June 24*, A communiqué issued at the end of the two-day Ottawa summit meeting of leaders of the seven major industrialized nations emphasized continued monetary and fiscal restraint to combat inflation and the need to develop the use of coal, nuclear power, and other fuels to break the link between economic growth and oil consumption.

*June 27*, Citibank lowered its prime lending rate to 11.5%; the US prime rate had fallen to this level from 14% at the start of the month.

*June 28*, The Canadian Paperworkers Union said it would begin a staggered shutdown of 12 pulp and paper mills in Eastern Canada on July 5 to extract "meaningful" contract proposals.

### July 1980

*July 3*, A strike by 39,000 copper miners brought a virtual halt to production in the United States; as a result, Canadian producers benefited from higher export demand and a firming of prices, up 10 cents to 97 cents US in the last two weeks.

*July 4*, A strike by the Canadian Paperworkers Union closed all but one of the 13 mills operated by Abitibi-Price Inc., the world's largest newsprint supplier (a tentative settlement was reached on July 28).

*July 16*, For a second time the National Energy Board decided to delay an increase in the price of natural gas sold to the United States, because of weak market demand in recent months.

*July 25*, BC breweries were closed by a lockout, following a similar lockout in Alberta earlier in the week over deadlocked contract negotiations. Canada ended an embargo on grain sales to the USSR; Sen. Hazen Argue, minister responsible for the Canadian Wheat Board, said Canada would resume normal deliveries of grain.

*July 30*, Oil prices in Eastern Canada rose about half a cent a gallon, as the federal government discontinued a subsidy of 18 cents a barrel to eastern refineries on domestic crude oil.

*July 31*, Alberta and Saskatchewan governments raised the domestic price of crude oil by \$2 a barrel to \$16.75. The Bank of Canada rate rose 0.15 percentage points to 10.31%, the first increase since early in April.

### August 1980

*Aug. 5*, The federal government extended its quota on imports of footwear for one year, beginning Dec. 1, 1980; the EEC threatened to retaliate under the GATT treaty.

*Aug. 11*, Canadair Ltd. received certification for the \$7 million Challenger jet for which it had received 167 orders mostly for delivery in the United States.

*Aug. 16*, General Motors Corp. of Detroit raised prices for its 1981 cars by 1.9% from final 1980 prices.

### September 1980

*Sept. 15*, Canada Savings Bonds for 1980-81 would offer a return of 10.5%; some investment dealers noted the rate was below yields available for some savings and term deposits, and redemptions of CSB's were expected to continue to increase on top of the \$1.8 billion worth of

bonds already cashed in since the beginning of the fiscal year.

*Sept. 19,* In the Federal Republic of Germany, the Lombard rate was reduced 0.5% to 9.0% as recessionary forces intensified; real GNP declined in the second quarter in the Federal Republic of Germany; Japan also appeared ready to participate in the easing of interest rates occurring outside of North America, as the Bank of Japan said it would carry out monetary policy with more flexibility to spur economic growth.

*Sept. 24,* Oil exports from Iraq and Iran were halted as war broke out between the nations, whose combined output accounted for 20% of OPEC production.

*Sept. 25,* The Federal Reserve Board raised its discount rate from 10% to 11% in response to strong expansion of the monetary aggregates; the bank rate rose to 11.20%, up from 10.57% at the start of the month; the Bank of Canada said it had acted to moderate the recent upward trend in short-term interest rates, but that its willingness to do so was tempered by the threat that a significant acceleration of monetary expansion and a significant decline in the external value of the Canadian dollar would intensify the problem of inflation.

*Sept. 26,* In reaction to the discount rate increase, US banks raised their prime lending rate half a percentage point to 13%.

## October 1980

*Oct. 2,* Citibank led an increase in the US prime lending rate to 14.0%, up from 13.0% a week earlier; the bank rate in Canada rose in unison to 11.8%; chartered banks in Canada followed by raising the prime rate to 13.0% from 12.25%.

*Oct. 3,* Saudi Arabia, Kuwait, Qatar, and the United Arab Emirates announced they would raise oil production by one million barrels a day to partly offset the loss of oil while the Iraqi-Iran war continued; crude oil prices had moved up about 20% since the war in the Mid-East began as 2.5 million barrels a day of oil production was lost.

*Oct. 10,* Chartered banks lowered their prime rates to 12.75%.

*Oct. 14,* A two-week old dispute ended between 40,000 federal clerical workers and Treasury Board.

*Oct. 17,* Despite criticism from the Carter administration, all major US banks raised their prime rates to 14%.

*Oct. 28,* A federal budget was introduced, with most of the initiatives directed toward energy policies; the government proposed an immediate increase of 80 cents a barrel in the domestic price of crude oil, with increases of at least \$4.50 a year in the next three years; the energy policy stressed increased Canadian control of the oil and gas industry and an increase in the federal government's share of oil revenues, largely at the expense of private industry; unemployment insurance premiums were raised 33%; the budgetary deficit remained about \$14 billion in fiscal 1981-82, as planned expenditures rose 13%; the government indicated its continued support of the Bank of Canada's monetary policy.

*Oct. 29,* All major US banks raised their prime rates half a percentage point to 14.5%, the highest level since late May, attributing the increase to a rising cost of obtaining loanable funds; federal funds, for example, closed at 15%.

*Oct. 31,* Chartered banks announced an increase in the prime rate to 13.25% from 12.75%; mortgage rates rose to 14.75% for two-year and 15.25% for five-year terms.

## November 1980

*Nov. 3,* Chartered banks in Canada raised their prime rate from 12.75% to 13.25%.

*Nov. 6,* All major US banks raised their prime lending rate from 14.5% to 15.5%.

*Nov. 13,* Ontario Treasurer Frank Miller tabled a mini-budget, including the removal of the 7% sales tax on furniture, major appliances, and residential building materials, and a sales tax rebate up to \$700 on the purchase of new light trucks and vans; the retail sales tax cuts were estimated to cost \$230 million annually.

*Nov. 18,* The US prime lending rate rose to 16.25%, following a one percentage point increase in the FRB's discount rate to 12%; the board added a 2% surcharge on the discount rate for banks that borrow frequently from the discount window.

*Nov. 21,* The prime rate in the US rose to 17.0%, the second 0.75 percentage point increase in the week.

*Nov. 26,* The US prime rate rose to 17.75% at most banks, and 18% at some, as the upward spiral of interest rates closed on the peaks attained in April.

*Nov. 27,* The Canadian prime rate rose to 14.5% in contrast to the previous peak of 17.5% in 1980.

## December 1980

*Dec. 4,* The FRB raised its discount rate from 12% to 13% and increased its surcharge for frequent borrowing from 2% to 3%.

*Dec. 10,* The US prime rate rose to 19% following the increase in the discount rate (and peaked at 21.5% in the following week).

*Dec. 12,* Mortgage rates at most Canadian chartered banks rose by 0.5 to 1.25 percentage points to 16% for a one-year term and 16.75% for five-year terms.

*Dec. 19,* The prime rate in Canada rose to a record 18.25%.

*Dec. 31,* The United States removed tax restrictions that discouraged Americans from attending conventions in Canada.

## January 1981

*Jan. 14,* A cold front reduced temperatures to about 11°C colder than normal in most of the Eastern US and Canada.

*Jan. 16,* The federal government raised the export price of natural gas by 10.5%, effective April 1.

*Jan. 29,* The United States abolished all controls on domestic oil prices, effective immediately.

## February 1981

*Feb. 3,* The Manitoba government tabled a budget calling for a 15% increase in spending in fiscal 1981-82; the largest increases were to meet higher borrowing costs and to maintain the freeze on hydro rates.

*Feb. 13,* The Bank of Canada announced that it was lowering the target range for the growth of the money supply

(M1) by one percentage point; the new target would be 4% to 8% growth from the average level of M1 for the three months centred on September 1980.

*Feb. 18,* US President Ronald Reagan sent economic policy initiatives to Congress calling for the largest tax and spending cuts in US history; personal income taxes would be reduced by 30% over three years beginning in July, while an accelerated depreciation allowance plan was introduced for business; expenditure cuts amounted to \$40.8 billion, or 5%-6% of the planned outlays for the fiscal year ending Sept. 30, 1982; it was predicted that the budget would not be balanced until the fiscal year ending in September 1984.

### March 1981

*Mar. 4,* Syncrude Canada Ltd. resumed shipments of synthetic crude oil following production disruptions since early January; at the same time, Alberta implemented the first stage of its crude oil cutbacks.

*Mar. 6,* The Saskatchewan provincial budget cut personal income taxes by four percentage points and raised tobacco tax rates, leaving the fiscal balance with a slight surplus; the budget forecast called for the provincial heritage fund to increase by more than \$1 billion during the year.

*Mar. 10,* The BC budget tabled by Finance Minister Hugh Curtis called for a sharp increase in taxes to avoid a budgetary deficit; the retail sales tax was boosted from 4% to 6%, levies were increased on gasoline, liquor, and tobacco, and the corporate income tax was raised one percentage point.

*Mar. 11,* Finance Minister Jacques Parizeau announced that Quebec's budgetary deficit would remain at about \$3 billion in fiscal 1981-82; a 12.8% increase in spending would be matched by higher revenues from tobacco and Crown corporations; corporate and personal income taxes would be reduced early in 1982.

*Mar. 21,* The Alberta Court of Appeals ruled that the federal government excise tax on natural gas from a provincially owned well was unconstitutional.

*Mar. 23,* The St. Lawrence Seaway shipping season began nine days ahead of schedule and a day earlier than in 1980. The three largest US auto firms decided to extend their rebate programs through the first week of April; the firms were encouraged by the strengthening of auto sales following the introduction of rebates in mid-February.

### April 1981

*Apr. 8,* The 1981-82 New Brunswick budget raised corporate income taxes, and changed the tax on fuels and tobacco to a fixed percentage of the selling price; with expenditure up 16.3%, borrowing requirements rose slightly to \$260 million; the finance minister recommended that this debt should be financed by the Alberta Heritage Fund whenever possible.

*Apr. 14,* The Alberta budget for fiscal 1981-82 projected a 16.3% increase in expenditures and a 1.2% decline in revenues as royalties dropped from oil leases; the budget was expected to be \$336 million in deficit, versus a \$682 million surplus in 1980-81. The Manitoba budget contained no new tax or spending programs except for increased taxes on tobacco and alcohol. The Newfoundland budget called for

higher taxes on tobacco, motor fuel and vehicles to contain borrowing requirements to \$260 million; revenue from offshore oil and gas developments was not expected to become significant until 1987.

*Apr. 24,* The price of gasoline and home heating fuel would rise 0.8 cents a litre on May 1 as a result of a special \$1.15 a barrel levy to help finance Petro-Canada's acquisition of Petrofina Canada. The United States lifted an embargo on grain shipments to the USSR.

### May 1981

*May 19,* The Ontario budget for 1981-82 raised taxes by \$603 million; expenditures were projected to increase 12.2% to a level of \$19.4 billion, resulting in a deficit of \$997 million; Ontario's share of personal income taxes collected by the federal government was increased from 44% to 48%; Ontario health insurance premiums were to increase 15% on October 1, taxes on gasoline, cigarettes, tobacco and beer were set at a fixed percentage of the retail price, sales tax exemptions on household furniture and appliances and selected building materials and a tax rebate on light trucks and vans would expire on June 30.

*May 28,* Oil ministers of OPEC announced they had decided to freeze oil prices at current levels.

*May 30,* Japan was reported to have agreed to a limit on car exports to Canada of 170,000 units for the year beginning Apr. 1; this equalled the 1980 volume plus a 7% growth factor.

### June 1981

*June 1,* Mexico announced oil price reductions of up to \$4 a barrel. Alberta implemented the second stage of oil production cutbacks; production of light and medium crude oil would be held to 848,000 barrels a day until the end of August; production had been cut by 60,000 barrels a day Mar. 1, and the second stage added a further cutback of 60,000 barrels a day.

*June 3,* The federal government raised the wholesale price of gasoline and home heating oil by 1.6 cents a litre.

*June 9,* The 72 day-old strike by 160,000 coal miners in the United States ended.

*June 30,* Across Canada, 22,862 inside postal workers went on strike.

### July 1981

*July 1,* The wellhead price of crude petroleum in Canada rose \$1 a barrel to \$18.75.

*July 13,* About 48,000 BC woodworkers went on strike over wages; this walkout was joined by 12,500 pulp and paper workers, effectively closing down the BC forestry, wood, and pulp and paper industries.

*July 29,* The US House of Representatives voted its approval of a three-year administration plan to reduce personal income taxes by 25%; congress had now approved all legislation proposed in the Reagan administration's economic program.

**August 1981**

*Aug. 11,* The labour dispute involving inside postal workers was settled.

*Aug. 24,* Most BC lumber and pulp mills reopened following the strike that started July 13.

*Aug. 26,* Nigeria reduced the price of crude oil by \$4 a barrel to US\$36 in response to a glut on world markets.

**September 1981**

*Sept. 1,* The dispute over energy prices between the federal and Alberta governments was resolved. The energy price agreement called for a blended price for new and old oil (old oil refers to discoveries made before Dec. 31, 1980). This blended wellhead price would rise \$2.50 a barrel on Oct. 1, then \$4.50 in 1982, and \$8 a year thereafter until 1986. These government estimates were based on the projected world price to be paid for new oil, and a ceiling of 75% of the world price for conventional old oil. Natural gas prices would rise 25 cents per thousand cubic feet every six months from February 1982, leaving gas prices at about 65% of oil prices. The export tax on natural gas was removed to help alleviate the glut in Canada. Both levels of government agreed to spur development of the Alsands and Cold Lake oil projects, worth over \$25 billion. The incentives for greater Canadian participation in the oil industry remained essentially intact.

*Sept. 2,* A strike by 1,500 grain handlers at Thunder Bay reduced grain exports by about \$10 million a day, according to the Canadian Wheat Board. (The strike lasted for 16 days.)

*Sept. 10,* The Alberta cabinet issued an order-in-council to restore full production of oil following the pricing agreement.

**October 1981**

*Oct. 1,* The Quebec minimum wage rose to \$4.00 an hour, the highest rate in Canada; the Ontario minimum wage rose to \$3.50.

*Oct. 3,* The first shipments of Canadian natural gas began to move to the western US through the pre-built section of the Alaska Highway gas pipeline; export contracts called for 240 million cubic feet a day to flow through the western leg of the pipeline, and 900 million cubic feet through the eastern leg by 1986.

*Oct. 4,* The European Monetary System exchange rate grid was realigned significantly for the first time since March 1979; the German mark and Dutch florin were revalued up by 5.5%, while the Italian lira and French franc were devalued by 3%.

*Oct. 30,* OPEC moved toward a more unified price structure, as Saudi Arabia agreed to raise its benchmark price of oil to \$34 a barrel and reduce output to 8.5 million from 10.5 million barrels a day; the average OPEC price was expected to rise about \$1 to \$35 a barrel; prices were to be held at this level until the end of 1982.

*Oct. 31,* The FRB reduced the discount rate from 14% to 13%; a 2% surcharge on frequent borrowers remained.

**November 1981**

*Nov. 6,* The Ontario government offered a rebate on the 7% sales tax up to \$700 against the purchase of 1981 imported

or domestic cars (the program expired Dec. 5). Ford Motor Co. of Canada announced a \$500 cash rebate program on purchases of its 1981 cars before Nov. 30.

*Nov. 12,* The federal budget called for reduced budgetary deficits through a combination of higher revenues resulting from the extension of the corporate income tax surcharge, less generous depreciation allowances, the closing of numerous personal tax loopholes, and gains in energy revenues; expenditure was to be slowed by cutbacks in transfer payments to provinces and limited new aid programs for homeowners, small businesses, and farmers to cope with high interest rates.

*Nov. 18,* The Quebec government introduced a supplementary budget, highlighted by an immediate 6.5 cents a litre increase in the gasoline tax, higher alcohol tax levies, and a cancellation of the 2% personal income tax cut which was due to take effect Jan. 1.

**December 1981**

*Dec. 12,* OPEC oil ministers agreed to reduce prices for higher quality grades of crude oil by 20 to 70 cents a barrel; the Saudi Arabian benchmark price remained unchanged at US\$34 a barrel.

*Dec. 19,* The federal government changed several of the tax proposals in the November budget, depriving the treasury of \$150 million a year.

*Dec. 30,* The United States announced a series of economic sanctions against the USSR to protest the imposition of martial law in Poland; the sanctions particularly restricted the trade of advanced technology and equipment.

**January 1982**

*Jan. 20,* The Conference Board of Canada reported that its index of consumer confidence rose from a record low of 63.1 to 64.1 in the fourth quarter, the first increase in 1981. (The index level was 100 in 1961.)

*Jan. 22,* The federal government authorized 19 foreign-owned banks to open operations in Canada, raising the number of such banks to 40 since changes to the Bank Act took effect Nov. 1, 1981.

*Jan. 27,* Average OPEC oil prices fell to US\$33.85 a barrel in reaction to continued slack demand; the price was about \$1 below year-earlier levels, and slightly below the \$34 benchmark price for Saudi Arabian crude.

*Jan. 30,* General Motors of Canada announced price reductions of \$500 to \$750 on most cars and trucks beginning Feb. 1 for 60 days; the announcement followed failure to renegotiate labour contracts between General Motors of Detroit and the United Auto Workers.

**February 1982**

*Feb. 13,* The Ford Motor Co. of Detroit and the United Auto Workers agreed on renegotiation terms that would save the company an estimated \$300 a car in labour costs, while providing increased job security to workers.

*Feb. 15,* Ocean Ranger, the largest offshore drilling rig in the world, sank off the coast of Newfoundland; two other rigs working in the Hibernia field were recalled for inspection.

*Feb. 19,* The BC government imposed a 10% limit on wage increases for public sector employees.

### March 1982

*Mar. 10,* The Alberta government legislated an end to the month-old strike by 7,000 nurses.

*Mar. 20,* Hydro-Québec and New York State signed a 13-year contract to take effect in September 1984; the terms of the accord call for New York to buy 111 billion kWh of electricity, worth \$11.6 billion; last year, New York purchased \$184 million of electrical power from Quebec.

*Mar. 21,* Oil ministers of the OPEC nations agreed to set an output ceiling of 18 million barrels a day, down from the current 20 million barrels; Saudi Arabia announced additional cuts in its production to 7 million barrels a day by April 1, effectively reducing OPEC output to 17.5 million barrels, and warned of further reductions to protect the benchmark price of US\$34 a barrel.

*Mar. 29,* Iraq announced the cancellation of an order for 13,500 Canadian-built cars, worth about \$100 million in export sales.

### April 1982

*Apr. 1,* The Quebec National Assembly has adopted a bill that abolishes mandatory retirement at age 65; the legislation, the first of its kind in Canada, affects all workers except those under federal jurisdiction.

*Apr. 5,* The BC budget called for a \$358 million deficit, due to sluggish revenue growth and some minor increases in tax rates on chartered banks.

*Apr. 14,* The federal government will delay for at least six months the plan to start collecting federal sales tax at a wholesale rather than manufacturing level. The Alberta government has cut its average royalty rates on the oil and gas industries to 36% and 34% respectively, which should yield \$1.3 million in additional revenues to the petroleum industry this year.

*Apr. 27,* The Manitoba government re-introduced rent controls, with a ceiling of 9% retroactive to January 1.

*Apr. 30,* The NS budget calls for a broad range of tax increases, including a jump in the retail sales tax from 8% to 10%, and sharply higher personal and corporate income tax rates. Operating expenditure of government departments will rise 1.28% in 1982-83, while capital spending will be cut by 21.5%.

### May 1982

*May 6,* The Canadian Wheat Board has signed a long-term agreement with China, worth about \$2.25 billion at current prices; China will purchase between 10.5 million and 12.5 million tonnes of wheat in a three-year period beginning August 1.

*May 18,* Nine member states of the EEC overruled Britain and voted for large increases in food prices; the vote was immediately denounced by Britain, which may now refuse to pay all or part of its contribution to the EEC budget.

*May 19,* Bombardier Inc. has signed a letter of intent to provide New York City with 825 subway cars worth \$1 billion; under terms of agreement, vehicles will have 60%

Canadian and 40% American content; delivery will take place between 1984 and 1989. Federal Justice Minister Jean Chrétien announced that the federal government has filed a unilateral reference to the Supreme Court of Canada for a decision on who owns the seabed resources in the Hibernia area near Newfoundland; the Nfld. government promptly announced a day of mourning.

*May 27,* Britain announced that it had recaptured South Georgia in the Falkland Islands, as the month-long war with Argentina moved toward resolution.

*May 28,* The International Wheat Council has forecast a record output of wheat this year, estimating a world crop of between 465 and 470 million tonnes, compared to 459 million last year.

### June 1982

*June 1,* The British National Oil Co. raised its price from US\$31 to US\$33.50 a barrel in response to the recent firming of prices in international spot markets.

*June 6,* The two-day summit of major industrial countries at Versailles ended today; the US was unable to persuade western Europeans to adopt tough credit curbs against the USSR and its allies, while Canada and some western European states were unable to persuade the US to change its policies in order to reduce interest rates; the leaders agreed to study fluctuations of exchange rates that harm trade; five countries, excluding Canada and Italy, will conduct the study and report to next year's summit.

*June 14,* The European monetary system underwent its second major realignment of currency values in less than a year; the French franc was devalued by 5.75% and Italian lira by 2.75%, while the German deutchmark and Dutch guilder were revalued up 4.25% each.

*June 20,* The Supreme Court of Canada has upheld an Alberta court of appeal ruling that the federal government does not have the power to tax natural gas exports.

*June 28,* The federal government introduced a budget today, in part calling for limits of 6% and 5% to wage increases for 500,000 federal public servants and urged private sector wage settlements to follow this pattern.

*June 29,* An agreement was reached and subsequently ratified by 10,000 employees of Inco Ltd. ending a 32-day strike.

### July 1982

*July 9,* The federal government reintroduced quotas on imported leather footwear at a level of 11.1 million pairs annually until November 1984; the EEC threatened to retaliate with a surcharge on Canadian newsprint.

*July 20,* The FRB lowered its discount rate from 12.0% to 11.5%, in response to the recent reduction in monetary growth and an easing of short-term interest rates.

*July 21,* The Canadian Wheat Board has signed an agreement with Brazil to deliver 4.5 million tonnes of wheat over the next three years, valued at \$750 million.

### August 1982

*Aug. 5,* The Mexican government announced the implementation of a two-tier foreign exchange rate and asked for

a rescheduling of its foreign debt payments in an attempt to solve a deepening liquidity crisis.

*Aug. 12,* The governments of Japan and Canada reached an accord that will reduce the quota on Japanese passenger cars by 23.5% to 153,000 units in 1982.

*Aug. 16,* The FRB lowered its discount rate to 10.5%, the lowest rate in two years; this was the third cut in the discount rate in the past four weeks.

## September 1982

*Sept. 1,* The eastern leg of the Alaska Natural Gas Transportation System opened today; the pipeline could raise exports of natural gas from Alberta to a minimum of \$1.2 billion annually and a maximum of \$1.7 billion at current prices.

*Sept. 14,* The United Auto Workers of Canada and General Motors Ltd. reached a two-year labour agreement calling for only cost-of-living adjustments until the last six months of the contract.

*Sept. 30,* Helmut Kohl, leader of the Christian Democratic Party, formed a new governing coalition to replace former Chancellor Helmut Schmidt in the Federal Republic of Germany.

## October 1982

*Oct. 9,* The FRB reduced its discount rate from 10.0% to 9.5%.

*Oct. 19,* The 3,500 members of the International Longshoremen's and Warehousemen's Union were locked out today in British Columbia, effectively closing export outlets for many western Canadian resource industries.

*Oct. 25,* The new Canada Savings Bond campaign began; the federal government set the interest rate at 12% in the first year.

*Oct. 27,* Finance Minister Marc Lalonde introduced an economic statement to the House of Commons, calling for a budget deficit of \$23.6 billion in fiscal 1982-83, up from the \$19.6 billion predicted in the June budget and \$10.5 billion foreseen in Nov. 1981.

## November 1982

*Nov. 5,* About 9,600 United Auto Workers went on strike, closing the operations of Chrysler Canada Ltd., in an effort to regain the wage concessions granted in 1980.

*Nov. 19,* The FRB reduced the discount rate from 9.5% to 9.0% as part of a policy abandoning until year end a growth rate target for the money supply.

## December 1982

*Dec. 9,* The Quebec National Assembly approved Bill 105, imposing a three-year contract settlement on 320,000 public service employees; the contract called initially for a wage rollback up to 19.45% for three months, then setting wages at an average 2.5% above the level before June 1982.

*Dec. 13,* The strike by 9,600 United Auto Workers against Chrysler Canada Ltd. ended after five weeks, with the union closing some of the gap in wages paid relative to workers at General Motors of Canada Ltd. and Ford Motor Co. of Canada Ltd.

*Dec. 20,* OPEC oil ministers formally agreed to a production ceiling of 18.5 million barrels a day in 1983 and to freeze the benchmark price at US\$34 a barrel.

## January 1983

*Jan. 11,* Three trust companies in Ontario — Seaway Trust Co., Greymac Trust Co. and Crown Trust Co. — with assets of over \$2.0 billion were placed under trusteeship because of questionable lending practices; the move was authorized by the Ontario cabinet following an investigation into a series of transactions involving the sale of 10,931 apartment units previously owned by Cadillac Fairview Ltd. in Toronto.

*Jan. 28,* The National Energy Board recommended a doubling of authorized natural gas export volumes to 11.5 trillion cubic feet a year.

## February 1983

*Feb. 17,* Inco Ltd. announced that its 10-month shutdown of its nickel operations at Sudbury, Ont. would end April 4, when 11,000 workers would be recalled.

*Feb. 21,* The 70,000 members of the Centrale de l'Enseignement du Québec voted to suspend their illegal strike which began on Jan. 26 as a protest against wage contract terms imposed in December.

## March 1983

*Mar. 8,* The US International Trade Administration ruled that imports of Canadian softwood lumber were not being subsidized, in a preliminary ruling that import duties were not justified.

*Mar. 15,* OPEC reached an accord which features an official price of US\$29 a barrel, a production ceiling of 17.5 million barrels a day, and increased emphasis on maintaining discipline within the cartel.

*Mar. 17,* The Newfoundland budget was introduced with no major changes in either spending or tax programs.

*Mar. 22,* Hydro-Québec announced an agreement with a group of utility companies in New England that would raise exports of electricity by 33 billion kilowatt hours over 11 years beginning in 1986. In 1982 an agreement was reached with New York state for the export of 111 billion kilowatt hours.

*Mar. 24,* The Alberta budget predicted a deficit of \$845 million in fiscal 1983-84, due to weak resource revenues. Spending would increase by 7.5%, after a 35% jump in 1982, while higher health care premiums and tobacco excise taxes were the major tax changes.

*Mar. 29,* The Saskatchewan provincial budget was tabled showing a record deficit of \$317 million for fiscal 1983-84; the government increased spending by only 6.9%, but the growth of revenues was restrained by lower world oil prices.

## April 1983

*Apr. 9,* The 70,000 members of the Centrale de l'Enseignement du Québec rejected a settlement proposed by the Quebec government.

*Apr. 18,* The Nova Scotia budget proposed a reduction in the provincial deficit, a new 10% amusement tax and a

6% ceiling on increases in provincial operating expenditures.

*Apr. 19,* The minister of finance presented a new federal budget in the House of Commons with a \$4.8 billion four-year recovery program aimed at supporting private and public investment and improving financial position, growth prospects and job creation in the private sector.

*Apr. 25,* The federal government agreed to Bell Canada's proposed reorganization; the new company, Bell Canada Enterprises, would combine the telephone service operations with the operations of its 80 subsidiaries, including Northern Telecom, the largest telephone equipment manufacturer in the country.

## May 1983

*May 2,* Bell Canada International announced the renewal of an agreement with Saudi Arabia; this new five-year agreement, covering expansion and modernization of the telephone system of that country would amount to about \$1.6 billion and create 100 new positions for Canadian telecommunications management.

*May 5,* The federal government ended a home ownership stimulation plan which had been introduced in the June 1982 budget to stimulate the construction of new housing units by contributions of \$3,000 to create employment and improve access to home ownership.

*May 6,* The provincial government of New Brunswick tabled a budget, intended to reduce the provincial deficit from \$511.5 million to \$391.8 million.

*May 10,* The Quebec budget for fiscal year 1983-84 was introduced to the national assembly with the objectives of encouraging economic recovery and keeping the deficit at the same level of about \$3.2 billion. The treasurer of Ontario tabled a budget for 1983-84 imposing a new 7% tax on tobacco immediately, a higher sales tax on alcoholic beverages beginning May 24 and temporary abolition of the tax on furniture and appliances until Aug. 9.

*May 11,* Maintenance employees of the Montréal Urban Community Commission (MUCC) went on strike; the Quebec government tabled a bill on May 13 to end the unlawful strike.

*May 24,* New Quebec savings bonds went on sale offering 9.5% interest for the first year, then 8.5% a year until 1993; by federal and provincial agreement, premiums could be deducted from the pay of federal public servants residing in Quebec who bought bonds.

*May 25,* The US commerce department announced that no customs duties would be charged on Canadian lumber crossing the American border. The sale began of federal government bonds totalling \$300 million, offering an interest rate of 9.25%.

## June 1983

*June 8,* An agreement was reached between the Canadian Wheat Board and China on the export of 2.1 million tonnes of wheat to that country during 1983; the sale amounting to about \$400 million was part of an agreement signed in 1982.

*June 20,* An 8% Quebec sales tax on jet fuel for international flights was abolished.

*June 28,* The prime minister announced that the 6-and-5 program of wage restraint for the federal public sector would be continued into its second year, limiting wage increases to 5%. Canada concluded a new agreement with Japan on the import of Japanese cars in 1983, reducing the share of the Canadian automobile market held by Japanese manufacturers from 25% in 1982 to 19%.

*June 29,* The federal government awarded a contract for building six frigates to Saint John Shipbuilding and Dry Dock of New Brunswick. The governments of Quebec and France reached an agreement on building an aluminum smelter at Bécancour, Que.

*June 30,* The federal and Alberta governments signed a new agreement on oil and natural gas prices, freezing Canadian oil discovered before 1974 (about 70%) at the then current level of \$29.75 a barrel for the next 18 months, ensuring that the retail price of gasoline would not rise substantially for a certain period of time.

## July 1983

*July 1,* The Bank of Nova Scotia announced a program of reduced interest rates on new car loans taken out in July, to stimulate recovery in the auto industry.

*July 4,* Fees were introduced for selected medical services.

*July 7,* Premier W.R. Bennett of British Columbia introduced a restraint budget for 1983-84 and 26 new bills, providing for cuts in government services. More than 400 public sector employees would be laid off by Oct. 31, and about 5,000 others in the next few months.

*July 8,* The governments of Quebec and France signed an agreement for the development of a cable television system in France at an expected benefit of between \$200 million and \$1 billion to the province.

*July 13,* The government cut the air fare increase previously awarded to airlines from 10% to 5% because of its decision to continue the 6-and-5 program; the increase would take effect in October 1983.

*July 26,* It was announced that the excise tax on beer, wine and other alcoholic beverages would be raised 13% on Sept. 1; this increase was expected to generate some \$280 million in revenue.

*July 29,* Through a school board computer network management group, the Quebec government signed an agreement with IBM for the purchase of approximately 500 microcomputers to be installed in 133 high schools.

## August 1983

*Aug. 10,* In Quebec 9,000 clothing workers went on strike for the first time in 43 years because of slow progress in negotiations for a new collective agreement; a new agreement was accepted by 51% of the workers on Aug. 24 and the employees returned to work.

*Aug. 11,* At the 24th annual conference of first ministers, provincial premiers met in Toronto to discuss the economic situation in general, measures required to sustain the recovery, job creation, staff development and federal-provincial funding of health care services.

*Aug. 15,* The Ontario government announced a 10% tax increase on imported and domestic low-priced wines.

*Aug. 19,* The oil minister of the United Arab Emirates, Mana Saed Oteida, stated that OPEC would be maintaining the current production level of 17.5 million barrels a day unless market prices rose; this statement contrasted with the assertion made on Aug. 11 by the Saudi Arabian oil minister, Sheikh Yamani, that the OPEC production ceiling would most probably be raised during the last quarter of 1983.

*Aug. 25,* The Quebec government announced that it would terminate a one-year freeze on the wages of government managers.

### September 1983

*Sept. 6,* The 9,500 unionized workers of Chrysler Canada voted to accept a new collective agreement which narrowed the wage gap considerably between Chrysler and other major auto workers; the company planned to recall 3,200 laid-off workers and hire new employees to manufacture vans.

*Sept. 9,* After a two-day strike, the United Auto Workers and Massey Ferguson reached a settlement; workers accepted a three-year contract under which wages would be frozen, but a COLA clause would raise hourly rates by \$1.20 by the end of the period.

*Sept. 23,* The Ontario government announced that it would extend wage controls on the provincial public service to mid-1985 because of uncertainty about the economic future; however, collective bargaining rights were reinstated.

*Sept. 26,* The federal and Newfoundland governments signed an agreement to restructure the Nfld. fishing industry.

*Sept. 28,* China announced that it would purchase 82,000 tonnes of malted barley from Canada next summer.

### October 1983

*Oct. 2,* Six major Canadian airlines raised fares by 5% effective immediately.

*Oct. 4,* British Columbia forest workers initiated rotating regional strikes.

*Oct. 5,* The Bank of Montreal purchased Harris Bank of Chicago for \$675 million, raising its total assets to \$75 billion.

*Oct. 14,* Quebec signed an agreement with France to import 450,000 cases of new wines between now and Christmas; the deal was worth about \$20 million.

*Oct. 19,* The governments of Canada and the United States reached agreement on the export of specialty steels in the form of rods and bars to the United States; under the agreement, the value of shipments will remain the same as last year, US\$3.3 million.

*Oct. 20,* In Quebec 2,200 employees of 45 Provigo food stores went on strike.

*Oct. 24,* As a result of pressure on the federal government by Canadian farmers, prices were raised by \$15 a tonne to \$110 for barley and \$140 for oats.

### November 1983

*Nov. 3,* The 7,500 workers of the Steinberg food chain went on strike; on Nov. 14, a settlement was reached between the

two parties calling for a wage freeze for regular employees in the first year of the agreement, a 4% raise in the second year and an extension of the workweek to 38 from 37 hours.

*Nov. 14,* A settlement was reached between the BC government and 35,000 striking civil servants to end a two-week labour dispute; the strike protested the planned layoff of 1,600 employees without consideration of seniority rights; the agreement reinstated seniority rights in determining layoffs and granted wage increases equal to inflation in the next year.

*Nov. 18,* The minimum wage in Ontario, the lowest in Canada would increase from \$3.50 an hour to \$3.85 next March and \$4 in October. The increase was the first since 1981 and would affect about 200,000 workers.

### December 1983

*Dec. 6,* The Quebec government awarded a contract for the manufacture of 9,000 microcomputers to Matra-Comterm; the deal was part of the Quebec government's five-year plan to install 45,000 microcomputers in educational institutions by June 1989.

*Dec. 12,* Signalling some relief from rotating strikes in the BC forestry sector, the 45,000 members of the International Woodworkers of America reached an agreement in principle on a three-year contract settlement calling for no pay increase in the first year, followed by raises of 4% and 4.5% in the second and third years.

*Dec. 13,* The West German firm Messerschmitt-Bolkow Blohm and the federal and Ontario governments signed an agreement for the construction of a helicopter plant adjoining the Fleet Industries factory in Fort Erie, Ont.; the federal and Ontario governments were expected to contribute about \$37.7 million, and Canadian and West German firms \$34.9 million, with the creation of 600 permanent jobs.

*Dec. 22,* Federal Energy Minister Jean Cr tien introduced a number of measures to stimulate the oil industry; more oil would qualify for the world price on Jan. 1, 1984 to stimulate production and development of new wells; a change in the method of setting prices for various categories of oil discovered before 1973 would result in higher prices for medium-grade oil and probably lower prices for other categories; companies would be allowed to write off 100% of operating expenses in tax returns instead of 30%; the government would pay the full cost (about \$225 million) of building a pipeline between Shawinigan and Lac St-Jean, Que.

### January 1984

*Jan. 3,* The 2,800 doctors in Alberta were recently forced to accept a 1984 freeze in their fees, as ordered by the provincial minister of health; the 5% raise in 1983 covered only the increase in costs, but previously raises up to 17% had been approved to minimize extra billing; Alberta doctors received the highest fees in Canada, averaging about \$113,000 a year.

*Jan. 14,* Ed Lumley, federal minister of regional industrial expansion, signed an agreement with the Japanese government for the construction of a \$4 million automobile plant in Canada.

*Jan. 19,* The BC subsidiary of Alcan of Montréal submitted plans to the provincial government for a \$3 billion expansion of its Kitimat plant.

*Jan. 31,* In Quebec, the Steinberg chain received a permit to sell beer and wine in 43 of its stores, a right formerly held exclusively by small grocery stores.

## February 1984

*Feb. 2,* Plants were closed in the BC pulp and paper sector, affecting nearly 13,000 workers; these plant closings, aimed at reaching an agreement with the unions before the contracts of eastern forestry workers expired, were an attempt to avert an industry-wide strike.

*Feb. 15,* The federal minister of finance brought down a budget for the 1984-85 fiscal year; he forecast a budget deficit of \$31.5 billion with a borrowing requirement of \$25.6 billion but predicted an inflation rate of 5% for 1984 and real growth of 5%.

*Feb. 20,* The BC government tabled a budget, with its primary objective to shrink the deficit from \$1.3 billion in 1983-84 to \$661 million, partly through a 5.8% spending cut.

*Feb. 29,* Premier Peckford of Newfoundland announced a public sector wage control program which would freeze the wages of about 30,000 employees for two years, saving the government about \$25 million.

## March 1984

*Mar. 13,* The federal government announced that it would pay off the accumulated \$1.35 billion debt of Canadair; the Canada Development Investment Corp. would establish a new subsidiary that would assume the assets of the company but not its debt.

*Mar. 20,* The Newfoundland budget was introduced; the current account deficit was expected to drop by about 50% to \$32.2 million; to reduce operating expenses, about 550 public servants were to be laid off during the next year.

*Mar. 21,* The finance minister of Saskatchewan brought down a budget for 1984-85 with measures designed to

stimulate the private sector; in the public service, 2,300 managers and non-unionized executives would have their salaries frozen.

*Mar. 27,* The provincial administration of Alberta introduced a budget for fiscal year 1984-85, with the first reduction in spending in 43 years; the planned budget deficit would be \$566 million in the current fiscal year and about \$258 million the next year; about 1,100 public servants were to be laid off, those remaining were not to receive wage increases.

## April 1984

*Apr. 10,* Alcan officially announced plans to build a new aluminum smelter in Laterrière, Que.; this project would not generate any additional permanent jobs, but would save about 800 positions that would have been lost because of the closure of three obsolete plants in the region.

*Apr. 17,* J. Baxter, finance minister of New Brunswick, brought down a budget for the coming fiscal year; over \$60 million would be slashed from various programs, to hold the increase in government spending to less than 4.5%.

*Apr. 24,* Manitoba's budget for the 1984-85 fiscal year was tabled, differing from those of other provinces in that general expenditures were raised by 3%, including increases of 6% for social services, 5.7% for economic development and 7% for farming programs.

## May 1984

*May 15,* Ontario treasurer Larry Grossman brought down a budget for the 1984-85 fiscal year; the deficit was expected to be reduced to \$2.04 billion from \$2.35 billion the previous year.

*May 22,* Quebec's budget for the coming fiscal year was tabled in the national assembly; Quebec intended to hold its deficit at about the previous year's level, \$3.2 billion, with borrowing requirements remaining at about \$2.1 billion. Current federal import quotas on footwear were extended by 16 months to the end of March 1986.



APPENDIX 4

---

# CANADIAN HONOURS

An exclusively Canadian honours system was introduced in 1967 with the establishment of the Order of Canada. The honours system was enlarged in 1972 with the addition of the Order of Military Merit and three decorations to be awarded in recognition of acts of bravery.

**The Order of Canada**, instituted on July 1, 1967, the 100th anniversary of Confederation, is designed to honour Canadians for outstanding achievement and service to their country or to humanity at large. Originally, two levels of membership were provided: Companions of the Order and recipients of the Medal of Service. The order was revised in 1972 and now comprises three categories of membership: companions, officers — which includes all those who received the Medal of Service — and members. The last category is intended especially to recognize service in a locality or in a particular field of activity. Not more than 15 persons may be appointed in any one year as companions and the total number of companions is not to exceed 150. Officers of the order may be appointed to the number of 40 persons a year and up to 80 persons may be appointed yearly as members.

All members of the order are entitled to have letters placed after their names as follows: for the companion CC, for the officer OC and for the member CM.

The Queen is sovereign of the order and the Governor General holds office as chancellor and principal companion. Appointments to the order are made, with the Queen's approval, by the Governor General assisted by an advisory council which meets twice a year under the chairmanship of the chief justice of Canada. Members of the advisory council include the clerk of the Privy Council, the under-secretary of state, the chairman of the Canada Council, the president of the Royal Society of Canada, the president of the Association of Universities and Colleges of Canada and not more than two other members who may be appointed by the Governor General from among members of the order.

While Canadians are the primary recipients of the order, the constitution provides that persons who are not Canadian citizens and whom Canada desires to honour may be appointed as honorary members at any of the three levels of membership.

**The Order of Military Merit** has been established to provide a means of recognizing conspicuous merit and exceptional service by members of the Canadian Armed Forces, both regular and reserve. The order has three levels

of membership: commander (CMM), officer (OMM) and member (MMM).

The Queen is the sovereign of the order and the Governor General is the chancellor as well as a commander of the order. The chief of the defence staff is the principal commander of the order. Appointments to the order are made by the Governor General on the recommendation of the minister of national defence; nominations are made by the chief of the defence staff assisted by an advisory committee for the order.

The number of appointments made annually will vary, depending on the number of nominations submitted and approved. The order's constitution stipulates, however, that the total number of appointments made annually will not exceed a tenth of one per cent of the forces' average strength. Members of foreign armed forces who render particularly meritorious service to Canada or the Canadian Armed Forces in the course of their military duties may be made honorary members of the order at any of the three levels.

**Canadian bravery decorations.** A Medal of Courage was included in the Order of Canada in 1967 but it was found that a single medal would not serve to recognize in an equitable manner acts of bravery which entail varying degrees of risk. Consequently, no awards were made and the medal has now been superseded by a series of three decorations: the Cross of Valour (CV), the Star of Courage (SC) and the Medal of Bravery (MB). Instances of extraordinary heroism in circumstances of extreme peril will be marked with the award of the Cross of Valour; other outstandingly courageous actions may qualify for the award of the Star of Courage or the Medal of Bravery. The bravery decorations are awarded with the approval of the sovereign by the Governor General on the advice of a decorations advisory committee. They may be awarded to civilians, members of the Canadian Armed Forces and of the protective services, and may be awarded posthumously.

Honours and decorations announced from May 1980 to January 1983 and the dates of appointment of their recipients are as follows.

ORDER OF CANADA	
	Appointed May 16, 1980
Officer	
Joseph Schull, OC (deceased: May 19, 1980)	
Companions	Appointed June 23, 1980
Douglas Harold Copp, CC	

Roger Lemelin, CC  
The Honourable Louis-Philippe Pigeon, CC, QC

### Officers

J. Stuart Anderson, OC  
Gérald-A. Beaudoin, OC, QC  
S. Robert Blair, OC  
M.H. Marcel Caron, OC  
Frank R. Crawley, OC  
Walter Perry Deiter, OC  
Jack Diamond, OC, CM  
Jean-Louis Gagnon, OC  
Reginald Groome, OC  
James M. Ham, OC  
Donald Harron, OC  
Alan H. Holman, OC  
Mel Hurtig, OC  
M. Guy Lafleur, OC  
The Honourable Judy LaMarsh, PC, OC (deceased:  
October 27, 1980)  
J. Maurice LeClair, OC, MD  
George Henry Morris, OC  
J. Wendell MacLeod, OC, OBE, MD  
Lois Smith, OC  
J. Allyn Taylor, OC

### Members

Maxwell Bates, CM (deceased: September 14, 1980)  
Captain Louis Bisson, CM, OBE  
James Malcolm Cameron, CM, ED  
J.J. Jack Cennon, CM  
Yves Chevrier, CM, CD  
Donald E. Curren, CM, QC  
Raymond Daveluy, CM  
Roger Doucet, CM (deceased: July 19, 1981)  
Richard G. Dow Sr., CM  
The Very Reverend Father Arthur Gareau, CM, s.j.  
Father Andrew Goussaert, CM  
Donald M. Green, CM  
Albert William Haynes, CM  
E. Prudence Hockin, CM  
Edwin Roper Jarman, CM  
Gordon Wainwright Jukes, CM, CD, MBE  
Maryvonne Kendergi, CM  
H. Mart Kenney, CM  
Horst Gergen Paul Koehler, CM  
John Thomas Kyle, CM  
Mildred B. Lande, CM  
Vince Leah, CM  
Louis H. Lewry, CM  
Cecilia E. Long, CM  
George Boyd MacBeath, CM  
Dorothy G. MacKinnon, CM  
Anthony T. Mann, CM  
Mattie L. McCullough, CM  
Trevor F. Moore, CM  
A. Elizabeth Murray, CM  
Bernard Poirier, CM  
H. Hall Popham, CM  
Graham W. Rowley, CM, MBE  
Father Jean-Guy Roy, CM  
John Laurel Russell, CM

Archibald R. Shearer, CM  
Gordon M. Stirling, CM, QC  
Ernest Verge, CM, MD  
Evelyn Vessey, CM  
Raymond Alfred Vessey, CM

**Appointed July 1, 1980**

### Officer

Kenneth Douglas Taylor, OC

### Members

Laverna Dollimore, CM  
Roger V. Lucy, CM  
Mary Catherine O'Flaherty, CM  
John V. Sheardown, CM

**Appointed September 14, 1980**

### Companion

Terrance Stanley Fox, CC (deceased: June 28, 1981)

**Appointed October 24, 1980**

### Member

Edward Arunah Dunlop, CM, OBE, GM

**Appointed December 15, 1980**

### Companions

Larkin Kerwin, CC  
The Honourable Pauline M. McGibbon, CC, OC

### Officers

Murray Adaskin, OC  
Robert A. Bandeen, OC  
André Barbeau, OC, MD  
Shirley G.E. Carr, OC  
The Honourable Charles Mills Drury, PC, OC, CBE,  
DSO, QC  
Yves O. Fortier, OC  
Albert Wesley Johnson, OC  
André Langevin, OC  
The Reverend Father Emile Legault, OC, c.s.c.  
Ellen Signe MacLean OC  
The Honourable John L. Nichol, OC  
The Honourable Victor de B. Oland, OC, ED, CD  
Louis Siminovitch, OC  
Ronald J. Thom, OC  
Marc-Adélar Tremblay, OC  
Donald R. Wilson, OC, MD  
Harry Douglas Woods, OC

### Members

Ralph LeMoine Andrews, CM  
Bona Arsenaault, CM  
Germain Bigue, CM, MD  
Harold Byrnes, CM  
Gordon Irwin Cameron, CM  
Barbara V. Cormack, CM  
Colonel Eric W. Cormack, CM, OBE, ED, CD  
Colonel Georges-Henri Coulombe, CM, CD  
John Robert Dacey, CM, MBE  
Primo I. Di Luca, CM  
Soeur Léonne Dumesnil, CM, s.n.j.m.

Norman Alexander Dutton, CM  
 R. Fraser Elliott, CM, QC  
 Yves Gaucher, CM  
 Boniface Guimond, CM  
 R. Ben Gullison, CM, MD  
 Christie Harris, CM  
 The Reverend Canon William Edward Hart, CM  
 Alphonsine Howlett, CM  
 Kalmen Kaplansky, CM  
 J.E. Raymond Lemay, CM  
 Dorothy A. Macham, CM  
 Margaret Scott McCready, CM  
 Mary Hamilton McInnis, CM  
 S. June Menzies, CM  
 Marie-Thérèse Paquin, CM  
 Lazar Peters, CM, DFC  
 E. Howard Radford, CM  
 The Reverend Father Albert Roger, CM, c.s.c.  
 A. Gordon South, CM  
 Her Worship Marcelle B. Trépanier, CM  
 Margaret Trott, CM  
 J. Bryan Vaughan, CM  
 Peggy Ann Walpole, CM  
 The Reverend John G. Webb, CM  
 Charles Morley Willoughby, CM  
 William J. Withrow, CM, CD  
 Ray D. Wolfe, CM

## ORDER OF MILITARY MERIT

**Appointed June 16, 1980**

### Commanders

Major-General Joseph Armand René Gutknecht, CMM, CD  
 Brigadier-General Paul David Manson, CMM, CD  
 Major-General Kenneth John Thorneycroft, CMM, CD

### Officers

Lieutenant-Colonel Joseph Paul Denis Boiteau, OMM, CD  
 Colonel Bruce Trueman Burgess, OMM, CD  
 Lieutenant-Colonel Joseph Douglas Albert Call, OMM, CD  
 Lieutenant-Colonel Kenneth Burton Clarke, OMM, CD  
 Major Edward Key Dewar, OMM, CD  
 Colonel John Alan Robert Gardam, OMM, CD  
 Colonel David Victor Hampson, OMM, CD  
 Lieutenant-Colonel Austin Hilyard Hayes, OMM, CD  
 Colonel William Bentley MacLeod, OMM, CD  
 Major Bryce Gordon McDonald, OMM, CD  
 Lieutenant-Colonel William Cryle Robertson, OMM, MC, CD  
 Colonel Edward Edgar Henry Rowe, OMM, CD  
 Lieutenant-Commander Donald George Smith, OMM, CD  
 Lieutenant-Colonel Jerry Peter Stevenson, OMM, CD  
 Colonel Gordon Lewis Waterfield, OMM, CD

### Members

Master Warrant Officer Harold Haakon Alstad, MMM, CD  
 Captain Graham Gordon Barnard, MMM, CD

Warrant Officer William Edward Bowen, MMM, CD  
 Warrant Officer Robert Arthur Brignell, MMM, CD  
 Warrant Officer Joseph Raymond Paul Carriere, MMM, CD  
 Sergeant Jean Guy Chouinard, MMM, CD  
 Master Warrant Officer Earl Franklin Clarke, MMM, CD  
 Chief Warrant Officer Angus Forbes Cruickshank, MMM, CD  
 Chief Warrant Officer Frederick Allan Cruickshank, MMM, CD  
 Master Warrant Officer George Joseph Del Fabro, MMM, CD  
 Sergeant William Wayne Desaulniers, MMM, CD  
 Lieutenant (N) Peter Ralph Dickinson, MMM, CD  
 Master Warrant Officer Joseph Emilien Claude Gagnon, MMM, CD  
 Chief Warrant Officer Charles Robert Hotston, MMM, CD  
 Chief Warrant Officer Olavi Waino Karkkainen, MMM, CD  
 Captain Charles Henri Lapointe, MMM, CD  
 Master Corporal John Bruce Lockett, MMM, CD  
 Chief Petty Officer Second Class Willard Albert Losier, MMM, CD  
 Captain James Malcolm MacFie, MMM, CD  
 Master Warrant Officer Kenneth Maybee, MMM, CD  
 Chief Warrant Officer Kenneth Eric McIntosh, MMM, CD  
 Chief Petty Officer First Class Frederick Gilbert McKee, MMM, CD  
 Chief Warrant Officer Richard Allan Menzies, MMM, CD  
 Captain John William Miles, MMM, CD  
 Captain Richard Frederick Pane, MMM, CD  
 Lieutenant John Keith Rankin, MMM, CD  
 Chief Warrant Officer Guy Joseph Savard, MMM, CD  
 Captain Paul Arthur Veilleux, MMM, CD  
 Sergeant James Kelvin Walker, MMM, CD  
 Master Warrant Officer Karl Heinz Weiler, MMM, CD  
 Warrant Officer David Earle Whiting, MMM, CD  
 Captain James Henry Wooffindin, MMM, CD

**Appointed July 1, 1980**

### Members

Master Corporal George Edward Brian, MMM, CD  
 Sergeant James Gordon Edward, MMM, CD  
 Sergeant Joseph Richard Noël Claude Gauthier, MMM, CD

**Appointed December 8, 1980**

### Commanders

Lieutenant-General Harold Allison Carswell, CMM, CD  
 Vice-Admiral James Andrew Fulton, CMM, CD  
 Commodore Thomas Anthony McKenna Smith, CMM, CD

### Officers

Lieutenant-Commander Robert Benjamin Dougan, OMM, CD  
 Colonel Robert James Ford, OMM, CD  
 Major James Henry Gebhardt, OMM, CD

Lieutenant-Colonel Joseph Edward Gollner, OMM, CD  
 Colonel Ormand Archibald Hopkins, OMM, CD  
 Major David Fairclough Ives, OMM, CD  
 Major Isaac Allen Kennedy, OMM, CD  
 Colonel René Jean Marin, OMM, CD  
 Major Frank Hubert Mathew, OMM, CD  
 Colonel Stuart Andrew Millar, OMM, CD  
 Lieutenant-Colonel Robert Earl Moore, OMM, CD  
 Lieutenant-Colonel Richard William Spencer, OMM, CD  
 Major Gordon Stanley Wallis, OMM, CD  
 Major Lorne Elwood West, OMM, CD  
 Lieutenant-Colonel Joseph Jules François Wilson, OMM, CD

#### Members

Master Corporal Malcolm Bailey, MMM, CD  
 Master Warrant Officer Lawrence Nelson Bayley, MMM, CD  
 Chief Warrant Officer Donald Albert Brown, MMM, CD  
 Sergeant John Murray Bryson, MMM, CD  
 Sergeant Gordon Kenneth Bullock, MMM, CD  
 Master Warrant Officer William George Carnell, MMM, CD  
 Master Warrant Officer James Philip Chaston, MMM, CD  
 Chief Warrant Officer Willie Albin Colbourne, MMM, CD  
 Sergeant Joseph Henry Corbett, MMM, CD  
 Master Corporal Gérard Corneau, MMM, CD  
 Warrant Officer Dale Lloyd Dirks, MMM, CD  
 Chief Warrant Officer Terrance Benjamin Evans, MMM, CD  
 Chief Warrant Officer John William Russell Eveleigh, MMM, CD  
 Warrant Officer Lawrence Fish, MMM, CD  
 Captain Edgar Joseph Antoine Gagné, MMM, CD  
 Warrant Officer Raymond Arthur Gardner, MMM, CD  
 Chief Warrant Officer Philip James Graves, MMM, CD  
 Captain Joseph Albert Edmond Grenon, MMM, CD  
 Master Warrant Officer James Gerrard Hemlin, MMM, CD  
 Chief Warrant Officer George Anthony Henry Joseph Levesque, MMM, CD  
 Chief Petty Officer First Class Kenneth William McKendry, MMM, CD  
 Warrant Officer Joseph Lloyd Melanson, MMM, CD  
 Captain James Arthur O'Connor, MMM, CD  
 Master Warrant Officer Joseph Albert Arthur Rosaire Parker, MMM, CD  
 Master Warrant Officer Noël Wilfred Pitre, MMM, CD  
 Chief Warrant Officer John Leonard Baldwin Powers, MMM, CD  
 Warrant Officer Joseph Edwin Smith, MMM, CD  
 Chief Warrant Officer John Colin Stewart, MMM, CD  
 Warrant Officer Hendrick Albert Verwey, MMM, CD  
 Master Warrant Officer Dudley Charles McCleave Winchester, MMM, CD  
 Chief Warrant Officer Erwin Karl Witt, MMM, CD

#### BRAVERY DECORATIONS

Appointed January 28, 1980

##### Cross of Valour

Private Amédéo Garrammone, CV

##### Star of Courage

Joseph Cardinal, SC  
 Stanley Morris Mitchell, SC (posthumous)  
 Donald Anthony Richard, SC

##### Medal of Bravery

John Walter Chomlack, MB  
 Robert James Hammond, MB  
 Ted Howard Heyworth, MB  
 George Brian Hunter, MB  
 Gaétan Lavoie, MB  
 Jean-Pierre Lavoie, MB  
 Malcolm MacKinnon, MB  
 Constable Timothy John McQuade, MB  
 Stanley Reginald Powis, MB

Appointed May 12, 1980

##### Star of Courage

Brian Mervyn Clegg, SC  
 Michael Charles Fikis, SC (posthumous)  
 Robert Stephen Grant, SC  
 Martin Jerome Griffiths, SC  
 Franklin John Hicks, SC  
 Jane Ellen Morrison, SC  
 Constable Raymond Pitre, SC  
 Euclide Lucien Prévost, SC (posthumous)  
 Gordon Douglas Teeft, SC

##### Medal of Bravery

Constable Terrance Jeffrey DeGrood, MB  
 Ronald Gorrie, MB  
 Henry Charles Kanouse, MB  
 Paul Lawrence Labbie, MB  
 Murray Wayne Martin, MB  
 William John Meakin, MB

Appointed July 21, 1980

##### Star of Courage

Lyle David Barr, SC  
 Constable Michel Giroux, SC  
 Edward Charles Goodman, SC  
 Constable Murray D. Kilshaw, SC  
 Adéodat Lalonde, SC  
 Peter Zroback, SC

##### Medal of Bravery

Colleen Berry, MB  
 Bertrand Boucher, MB  
 Captain Harold Brazeau, MB  
 Paulette Elizabeth Burns, MB  
 Harold Eugene Earle, MB  
 Douglas Richard Isaac, MB  
 Pierre Labbé, MB  
 Lieutenant Basil Bernard Landry, MB  
 Constable Vernon Sokaluk, MB

**Appointed November 3, 1980****Star of Courage**

John Douglas Barnett, SC  
 Deputy Police Chief Thomas Grant Flanagan, SC  
 Syed Jalaluddin, SC (posthumous)  
 Owen Lorne Jones, SC (posthumous)  
 John Stanley MacKinnon, SC

**Medal of Bravery**

Keith Bezanson, MB  
 Constable Daniel Desroches, MB  
 Joseph Ivan Lawrence Desroches, MB  
 Luc Goudreault, MB  
 Constable Shamus Hall, MB  
 John Phillip Hiram, MB  
 Constable Richard Wilhelm Krenz, MB  
 Lester John O'Neil, MB  
 Colleen Lynn Serbyniuk, MB  
 Joseph Waldner, MB

**ORDER OF CANADA****Appointed June 22, 1981****Companions**

Margaret Atwood, CC  
 The Honourable Edward Milton Culliton, CC, QC  
 The Honourable T.C. Douglas, CC

**Officers**

Wilfred Gordon Bigelow, OC, MD  
 Gerald K. Bouey, OC  
 J. Maurice S. Careless, OC  
 Gilles G. Cloutier, OC  
 Paul-André Crépeau, OC  
 Betty Farrally, OC  
 Mavis Gallant, OC  
 James P. Gilmore, OC  
 George P. Grant, OC  
 Robert Orville Jones, OC, MD  
 Fernand Labrie, OC, MD  
 J. Ross MacKay, OC  
 Paul Marmet, OC  
 W. Earle McLaughlin, OC  
 Farley McGill Mowat, OC  
 Susan Marie Natrass, OC  
 Sydney Newman, OC  
 Clermont Pépin, OC  
 Germain Perreault, OC  
 Michael Snow, OC  
 Roger Tassé, OC, QC  
 Patrick Watson, OC

**Members**

Maurice Allan, CM  
 Lewis Haldane Miller Ayre, CM  
 Ruth Marion Bell, CM  
 Camille Bernard, CM  
 Victor Bouchard, CM  
 Gérard Brady, CM  
 Walter T. Burns, CM  
 Neil William Campbell, CM

Samuel Donaghey, CM  
 John G. Egnatoff, CM  
 Mark Evaluarjuk, CM  
 Martin Wise Goodman, CM  
 Sister Mary Greene, CM, f.m.a.  
 Margaret Hudec, CM, RN  
 Ian K. Hume, CM  
 Derek Arnold Inman, CM  
 The Reverend Norman S. Johnston, CM  
 Roland Jomphe, CM  
 Franz Kraemer, CM  
 Frank W. Laird, CM  
 Sarah Lavalley, CM  
 John-Barbalinardo Lombardi, CM  
 George Luscombe, CM  
 Hartland M. MacDougall, CM  
 Josephine McCarthy, CM  
 Edna Hellen McIvor, CM  
 Renée Morisset, CM  
 Thomas Joseph Pashby, CM, MD  
 Leona D. Pedosuk, CM  
 Tania Plaw, CM  
 Lieutenant-Colonel G. Charles Rafter, CM, CD  
 Stuart Allen Smith, CM Stan Stronge, CM  
 Jean Taranu, CM, MD  
 Patricia Taylor, CM  
 Lieutenant-Colonel Mark Tennant, CM, ED, CD  
 Richard M. Veenis, CM

**Honorary Member**

Zena Sheardown, CM

**Appointed December 14, 1981****Companions**

Alexander Colville, CC  
 Paul David, CC, MD  
 Arthur C. Erickson, CC  
 Antonine Maillet, CC

**Officers**

John H. Archer, OC  
 Bernard Belleau, OC  
 Jean-Louis Bonenfant, OC, MD  
 Charles R. Bronfman, OC  
 General Arnold Brown, OC  
 Bobby Clarke, OC  
 Albert Jean De Grandpré, OC, QC  
 Duncan R. Derry, OC  
 Joe Fafard, OC  
 Ursula Martius Franklin, OC  
 Jean-Paul Fugère, OC  
 Donald Southam Harvie, OC  
 Martha Henry, OC  
 The Honourable Wilbur Roy Jackett, OC  
 Norman Jewison, OC  
 William R. Lederman, OC, QC  
 Gaétan Lussier, OC  
 Gordon Francis J. Osbaldeston, OC  
 C.E. Ritchie, OC  
 Morris C. Shumiatcher, OC, QC

**Members**

Eric Anoe, CM  
 J. Edmond Arsenault, CM  
 Marcel Baril, CM  
 Selma de Lotbinière Barkham, CM  
 Benoit Bouffard, CM  
 Liona Boyd, CM  
 Robert B. Bradley, CM  
 Kenneth H.J. Clarke, CM  
 Fred Cogswell, CM  
 Roland Couture, CM  
 Paul-Émilien Dalpé, CM  
 M.J. Charles D'amour, CM  
 Agnes Boyd Davidson, CM  
 Louis C. Day, CM  
 Murray Dryden, CM  
 Kenneth P. Farmer, CM  
 Lawrence Andrew Gladue, CM  
 May C. Gutteridge, CM  
 G. Arnold Hart, CM, MBE  
 Margaret Perkins Hess, CM  
 Frederick Douglas Hodges, CM  
 Vladimir Krajina, CM  
 Laureano Leone, CM  
 Esse W. Ljungh, CM  
 The Reverend Joseph C. Mack, CM  
 Leon Major, CM  
 Monica Matte, CM  
 William M. Mayne, CM  
 Patricia M. Messner, CM  
 Imelda Millette, CM  
 Corporal John James Alexander Mundle, CM  
 Robert F. Osborne, CM  
 Jean H. Richer, CM  
 John Peter Lee Roberts, CM  
 Jean Scott Roe, CM  
 Dennis George Scott, CM  
 Henry A. Smitheram, CM  
 A. Ross Tilley, CM, OBE, MD  
 Jean Arnold Tory, CM  
 James Trifunov, CM  
 Murray Edmond Watts, CM

**ORDER OF MILITARY MERIT****Appointed June 15, 1981****Commanders**

Major-General Douglas Roger Baker, CMM, CD  
 Rear-Admiral Daniel Nicholas Mainguy, CMM, CD  
 Brigadier-General William Rae Thompson, CMM, CD

**Officers**

Colonel John Raymond Allingham, OMM, CD  
 Lieutenant-Colonel Michael Davis Barr, OMM, CD  
 Major Kenneth Daniel Benner, OMM, CD  
 Major Donald Stewart Ethell, OMM, CD  
 Major Clifford Beaufort Fletcher, OMM, CD  
 Colonel William Charles Gelling, OMM, CD  
 Major Albert Carl Hincke, OMM, CD  
 Lieutenant-Colonel William John Kitson, OMM, CD  
 Commander McGregor Fullerton MacIntosh, OMM, CD  
 Acting Colonel Harold William Madsen, OMM, CD  
 Major (W) Elizabeth Marion Nicholson, OMM, CD

Major Dale Garnett Schott, OMM, CD  
 Colonel Pierre Senecal, OMM, CD  
 Major Arthur Cluney Snow, OMM, CD  
 Lieutenant-Colonel Zenon Michael Zawislak, OMM, CD  
 Lieutenant-Colonel Frederick Taylor Zeggil, OMM, CD

**Members**

Sergeant Joseph Jean Paul Arsenault, MMM, CD  
 Chief Warrant Officer Bruce Barton, MMM, CD  
 Sergeant Stephen Cannon Burrell, MMM, CD  
 Chief Warrant Officer Peter Caissie, MMM, CD  
 Chief Warrant Officer Joseph James Casey, MMM, CD  
 Chief Warrant Officer Roland Bernard Edward Clark, MMM, CD  
 Chief Warrant Officer Norman Davis Colquhoun, MMM, CD  
 Warrant Officer Joseph Roger Doucet, MMM, CD  
 Chief Warrant Officer Joseph Gérard Fernand Drapeau, MMM, CD  
 Captain Joseph André Raymond Drouin, MMM, CD  
 Chief Warrant Officer Harry Newel Figenshaw, MMM, CD  
 Sergeant Dale Allan Frost, MMM, CD  
 Warrant Officer Ernest Horst Grossek, MMM, CD  
 Warrant Officer John James Ivany, MMM, CD  
 Master Warrant Officer Joseph Ronald Leblanc, MMM, CD  
 Chief Warrant Officer Michael James Lowe, MMM, CD  
 Master Corporal David McIntyre, MMM, CD  
 Corporal Robert Henry McLean, MMM, CD  
 Captain Robert Allen Nichols, MMM, CD  
 Lieutenant (N) Garry Ivan Olmstead, MMM, CD  
 Master Warrant Officer Joseph Pierre Jacques Paradis, MMM, CD  
 Chief Warrant Officer Paul Pelletier, MMM, CD  
 Warrant Officer William Earle Pennington, MMM, CD  
 Chief Warrant Officer Erving William Ramsay, MMM, CD  
 Captain Stephen Leslie Ricketts, MMM, CD  
 Chief Warrant Officer Ross Joseph Roenspiess, MMM, CD  
 Master Warrant Officer Jurgen Rothenburg, MMM, CD  
 Master Warrant Officer Norman Joseph Saulnier, MMM, CD  
 Master Warrant Officer Alistair George Shand, MMM, CD  
 Major Bernard George Williams, MMM, CD  
 Chief Warrant Officer Garfield Kenneth Zinck, MMM, CD

**Appointed December 7, 1981****Commanders**

Commodore Gordon Lewis Edwards, CMM, CD  
 Brigadier-General Jacques Richard Genin, CMM, CD  
 Major-General Roy Sturgess, CMM, CD

**Officers**

Commander Bruce Henry Baxter, OMM, CD  
 Colonel Gilbert Joseph Ludger Bérubé, OMM, CD  
 Lieutenant-Colonel Wayne Gwendolph Clements, OMM, CD

Major John Frederick David, OMM, CD  
 Lieutenant-Colonel James William Duncan, OMM, CD  
 Colonel Ronald Watson Fentiman, OMM, CD  
 Lieutenant-Colonel David Robert Gowdy, OMM, CD  
 Colonel William Harold David Hedges, OMM, CD  
 Major Jerry Jaroslav Kasanda, OMM, CD  
 Lieutenant-Colonel Thurston Jerome Kaulbach, OMM, CD  
 Lieutenant-Commander William Martin Koch, OMM, CD  
 Commander Peter George Alfred Langlais, OMM, CD  
 Major Donald Gordon Lisson, OMM, CD  
 Major Donald John O'Donnell, OMM, CD  
 Lieutenant-Colonel Michael Elford Pillar, OMM, CD  
 Captain (N) Keith Murray Young, OMM, CD

### Members

Warrant Officer Charles Gordon Addison, MMM, CD  
 Master Warrant Officer Michael Robert Alcock, MMM, CD  
 Chief Petty Officer Second Class James Henry Alleyne, MMM, CD  
 Chief Warrant Officer Donald Arthur Beattie, MMM, CD  
 Master Warrant Officer William Frank Blake, MMM, CD  
 Chief Warrant Officer Roy Hubert Clark, MMM, CD  
 Chief Petty Officer First Class David Charles Philip Coughlin, MMM, CD  
 Warrant Officer Joseph Maurice Croteau, MMM, CD  
 Warrant Officer Paul Philipe Cyr, MMM, CD  
 Sergeant Richard Frans Damczyk, MMM, CD  
 Chief Warrant Officer John Edwin Duder, MMM, CD  
 Master Warrant Officer Derk Wilhelmus Johan Duermeijer, MMM, CD  
 Master Warrant Officer James Patrick Easton, MMM, CD  
 Master Warrant Officer Roy Bruce Farmer, MMM, CD  
 Master Warrant Officer Charles Flynn, MMM, CD  
 Captain Marcel Gagnon, MMM, CD  
 Chief Warrant Officer Joseph Léonce Gallant, MMM, CD  
 Chief Petty Officer First Class Norbert Michael Jakubowski, MMM, CD  
 Sergeant Joseph Rino Levesque, MMM, CD  
 Chief Warrant Officer William MacKay, MMM, CD  
 Chief Warrant Officer James Nelson McCarney, MMM, CD  
 Captain Neil John McIlroy, MMM, CD  
 Master Warrant Officer John Bruce McQueen, MMM, CD  
 Chief Warrant Officer Joseph Norbert Messier, MMM, CD  
 Chief Warrant Officer George Frederick Mugford, MMM, CD  
 Captain David Howard O'Byrne, MMM, CD  
 Corporal Richard Joseph Hector Parent, MMM, CD  
 Petty Officer Second Class Joseph Michel G  rald Phaneuf, MMM, CD  
 Captain Clifford James Pierce, MMM, CD  
 Master Warrant Officer Ernest John Squire, MMM, CD  
 Warrant Officer Joseph Nazaire Paul Tondreau, MMM, CD

Chief Warrant Officer Robert William Whyte, MMM, CD  
 Chief Warrant Officer Eugene Howard Woolley, MMM, CD

### BRAVERY DECORATIONS

**Appointed January 19, 1981**

#### Star of Courage

Hugh Charles Cameron, SC, MD  
 Sharon O'Brien, SC

#### Medal of Bravery

Frank Barnes, MB  
 Robert Glen Butterworth, MB  
 Harold Carter, MB  
 RCMP Constable Charles Neil Duncan, MB  
 William Helmut Endress, MB  
 Jane Fleming, MB  
 Donald Irwin, MB  
 Lance Leston, MB  
 Auxiliary Constable Dieter Juergen Nieswand, MB  
 David Sangster, MB  
 Richard Snow, MB  
 Fire Constable Anthony Squires, MB  
 Constable William R. Willis, MB

**Appointed March 16, 1981**

#### Star of Courage

Sylvain Fillion, SC (posthumous)  
 Corporal David Albert Maloley, SC  
 Joseph Albert Fernand Ouellette, SC

#### Medal of Bravery

Constable Andr   Joseph Boivin, MB  
 Richard Joseph John Broadhead, MB  
 Robert William Cart  r, MB  
 Jessie Ann Foote, MB  
 Ralph Stephen Hemphill, MB  
 RCMP Constable Allen Robert Hopper, MB  
 Jean-Fran  ois Lemay, MB  
 Robert Melis, MB  
 Ernest Alexander Nash, MB  
 Jean-Jacques Plante, MB  
 Joseph Szimanski, MB  
 RCMP Constable Eric Brian Thorne, MB

**Appointed April 6, 1981**

#### Cross of Valour

Lester Fudge, CV  
 Harold Miller, CV  
 Martin Sceviour, CV

#### Star of Courage

Frank Davall, SC  
 Constable Ian Johnston Haines, SC  
 Petty Officer Patrick Garfield Marsh, SC  
 Chief Warrant Officer John Lorne McIntosh, SC  
 Constable John Ashley Robins, SC

**Medal of Bravery**

Leo Otis Brogan, MB  
 Robert Cree, MB  
 Fraser Nelson MacLeod, MB  
 Joséphat Trotter, MB  
 George Richard Tucker, MB  
 George Murray Wallace, MB  
 Richard Wayne Winchester, MB

**Appointed June 8, 1981****Star of Courage**

Joseph Daniel Charlebois, SC  
 Agent Claude Da Prato, SC  
 Master Corporal Rodderick Warren Hipson, SC, CD

**Medal of Bravery**

Corporal Marcel Raynold Bertrand, MB  
 Marc Boucher, MB  
 Christopher Cyril Boychuk, MB  
 James William Chrones, MB  
 Gerald Henry Covell Jr., MB  
 Russell Charles Cribb, MB  
 Garth Murray Evans, MB  
 Judi Ritchey, MB  
 Private Charles William Stewart, MB  
 Warrant Officer Arthur E. Warren, MB, CD  
 Constable Daniel Lenard Wiks, MB  
 Eric Roy Willmott, MB

**Appointed July 3, 1981****Star of Courage**

André Denis, SC  
 Captain Gary Louis Flath, SC  
 Brian John James Toney, SC, SM  
 Vincent Joseph Vautour, SC

**Medal of Bravery**

Jasmin Asselin, MB  
 Robert Graham Bull, MB  
 Sergeant George Enos Carpenter, MB, CD  
 Daniel Crepault, MB  
 Joseph Réal Doucet, MB  
 Réjean Joseph Gaétan Gelinis, MB  
 Master Corporal Joseph James Goetz, MB  
 Karen Olive Evelyn Jones, MB  
 Céline Joseph Vautour, MB

**ORDER OF CANADA****Appointed June 21, 1982****Companions**

Yvette Brind'Amour, CC  
 Kenojuak, CC  
 The Honourable Roland Martland, CC, QC

**Officers**

Robert A. Boyd, OC  
 Bertram N. Brockhouse, OC  
 Frank Manning Covert, OC, QC, OBE, DFC  
 Edwin A. Goodman, OC, QC  
 Barbara G. Hayes, OC

His Grace, The Most Reverend Maxim Hermaniuk, OC  
 Abigale Hoffman, OC  
 Bertram M. Hoffmeister, OC, CBE, DSO  
 Betty Kennedy, OC  
 Pierre Laurin, OC  
 Jean Le Moyne, OC  
 Alan Lund, OC  
 Al Purdy, OC  
 Ginette Reno, OC  
 Harold L. Snyder, OC  
 Jean-Guy Sylvestre, OC  
 William Teron, OC  
 Frank Russell Thurston, OC  
 Jean Casselman Wadds, OC  
 Jack H. Warren, OC

**Members**

Cathryne H. Armstrong, CM  
 André Bisson, CM  
 Hector (Toe) Blake, CM  
 Blanche Bourgeois, CM  
 Caroline Clow, CM  
 Harry Con, CM  
 Monsignor Georges M. Coriaty, CM  
 S. Joseph Cunliffe, CM  
 Michael R.L. Davies, CM  
 R. Burnell Eaton, CM, MDCM  
 Mel Fitzgerald, CM  
 Olaf Friggstad, CM  
 Peter R. Gorman, CM  
 Claude Grenier, CM  
 Hubert A. Guillet, CM  
 Ivan A. Hale, CM  
 Amelia Hall, CM  
 William Johnson, CM  
 Captain Henry C. Kohler, CM  
 Sylvio Lacharité, CM, CD  
 Gérard Lemay, CM, QC  
 Clifford Douglas Lumsdon, CM  
 Kathleen (Kay) Macpherson, CM  
 Marion Bell MacRae, CM  
 Colonel Alexander D.M. Matheson, CM, OMM, CD  
 M. Jean Nelson, CM  
 Kenneth H. Peacock, CM  
 Leonidas George Polymenakos, CM, MD  
 Mary Julia Roper, CM  
 Her Worship Mayor Norma Sealey, CM  
 Elizabeth Suzanne Semkiw, CM  
 Hide Shimizu, CM  
 Frederick Earle Sloane, CM  
 Ahab Spence, CM  
 Margaret M. Street, CM  
 Alan Miller Thomas, CM  
 Dorothy Elizabeth Timpany, CM, MD  
 Paul-Gaston Tremblay, CM  
 Harry Veiner, CM

**Appointed December 20, 1982****Companions**

Dr. Morley Callaghan, CC  
 His Eminence Gerald Emmett Cardinal Carter, CC  
 Camille A. Dagenais, CC

**Officers**

Dr. A. Alan Borovoy, OC  
 Osmond H. Borradaile, OC  
 Dr. Arthur N. Bourns, OC  
 Charles William Daniel, OC  
 Dr. Charles G. Drake, OC, MD  
 Marian Engel, OC  
 Françoise Faucher, OC  
 Dr. William Feindel, OC, MD  
 Dr. William Glassco, OC  
 The Honourable Clarence L. Gosse, OC, MD  
 Allan Gotlieb, OC  
 Dr. George W. Govier, OC  
 Gérard Lamarche, OC  
 Alexander Kennedy Paterson, OC  
 Stephen G. Podborski, OC  
 The Honourable Edouard Rinfret, OC, PC  
 Dr. Anthony Dalton Scott, OC  
 Boris P. Stoicheff, OC  
 Antoine Turmel, OC  
 Joyce Wieland, OC

**Members**

Doris Anderson, CM  
 Dr. William M. Armstrong, CM  
 Guy Beaudet, CM, ED, CD  
 Marjorie Blankstein, CM  
 Margaret Faskin Baird Campbell, CM, QC  
 Bruce Cockburn, CM  
 Gertrude Crosbie, CM  
 Gordon R. Cunningham, CM  
 M.J.-Réal Desrosiers, CM  
 Colonel Angus B. Duffy, CM, CD  
 Diane Lynn Dupuy, CM  
 James A.S. Edwards, CM  
 Philippe Filion, CM, ED  
 Dr. George M. Furnival, CM  
 Roland Gagné, CM  
 Dr. Gérard Gagnon, CM, MD  
 W. Douglas H. Gardiner, CM  
 Blanka Gyulai, CM, QC  
 Eileen Cameron Henry, CM  
 Robert N. Hinit, CM  
 Helen Hughes, CM  
 Dr. Illingworth Kerr, CM  
 Dr. Margaret Wade Labarge, CM  
 Captain J. Conrad Lavigne, CM, CD  
 Reverend Father Robert LeMeur, o.m.i., CM  
 Dr. Millicent Loder, CM, RN  
 Rita V. MacNeill, CM  
 John C. Miles, CM  
 Douglas L. Mowat, CM  
 Mercedes Palomino, CM  
 André Paquette, CM  
 Helen D. Phelan, CM  
 Rear Admiral Desmond W. Piers, CM, DSC, CD  
 Garnet Baker Rickard, CM  
 Alexandre-J. Savoie, CM  
 Thomas H. Smith, CM  
 Dr. Philip Surrey, CM  
 Peter Stanley Taraska, CM

Nena J. Timperley, CM  
 Ida Carlotta Wasacase, CM

**ORDER OF MILITARY MERIT****Appointed June 28, 1982****Commanders**

Major-General Ernest Basil Creber, CMM, CD  
 Major-General John Jacob Dunn, CMM, CD  
 Major-General Russell Norman, Senior, CMM, CD

**Officers**

Lieutenant-Colonel John Andrew Annand, OMM, CD  
 Lieutenant-Colonel Jean-Paul Roger Edmond  
 Beaugard, OMM, MBE, CD  
 Lieutenant-Colonel John Michael Black, OMM, CD  
 Major Robert Donald Brown, OMM, CD  
 Colonel Ross Wiley Buskard, OMM, CD  
 Lieutenant-Colonel Arthur Richard Butson, OMM, GC, CD  
 Lieutenant-Colonel Louis Wilhelmus Franciscus  
 Cuppens, OMM, CD  
 Colonel William Robert Dobson, OMM, CD  
 Colonel Kent Richard Foster, OMM, CD  
 Chief Warrant Officer Ronald Francis, OMM, MMM, CD  
 Major Alexander Graeme Hughes, OMM, CD  
 Major Grant Logan, OMM, CD  
 Major Kenneth Dale MacDonald, OMM, CD  
 Major Peter Brian McCulloch, OMM, CD  
 Lieutenant-Colonel Conrad Andrew Namiesniowski,  
 OMM, CD  
 Captain (N) John Maxwell Reid, OMM, CD

**Members**

Master Warrant Officer John Albert Barkemeyer, MMM,  
 CD  
 Master Warrant Officer Joseph Alain Bérubé, MMM,  
 CD  
 Master Warrant Officer Hjalmer George Bjornson,  
 MMM, CD  
 Chief Petty Officer First Class George Branchaud,  
 MMM, CD  
 Chief Warrant Officer Donald Evans Card, MMM, CD  
 Master Warrant Officer Joseph Robert Comeau, MMM,  
 CD  
 Petty Officer First Class Robert John Charles Currie,  
 MMM, CD  
 Master Warrant Officer Leonard James Davis, MMM,  
 CD  
 Master Warrant Officer Joseph Roger Dubuc, MMM,  
 CD  
 Chief Warrant Officer Leroy Alfred George, MMM, CD  
 Sergeant Alfred Bruno Hain, MMM, CD  
 Chief Warrant Officer Wilford George Hodgson, MMM,  
 CD  
 Warrant Officer Jack Garfield Kelly, MMM, CD  
 Warrant Officer Alfred Daniel Leblanc, MMM, CD  
 Chief Warrant Officer Arthur Leroy MacAdams, MMM,  
 CD  
 Chief Petty Officer First Class William Henry  
 McCrimmon, MMM, CD

Master Warrant Officer Louis Phillippe Maurice Mongrain, MMM, CD  
 Chief Warrant Officer Peter David Neddo, MMM, CD  
 Chief Warrant Officer Jeremiah O'Grady, MMM, CD  
 Chief Warrant Officer Ronald Ouellette, MMM, CD  
 Chief Petty Officer Second Class Harvey Lawrence Parsons, MMM, CD  
 Master Warrant Officer Charles Francis Pierce, MMM, CD  
 Chief Warrant Officer Alexander Poltaruk, MMM, CD  
 Major William Wetmore Quigley, MMM, CD  
 Chief Petty Officer First Class William John Robertson, MMM, CD  
 Warrant Officer George Herbert Rutherford, MMM, CD  
 Chief Warrant Officer Ernest Ralph Storey, MMM, CD  
 Lieutenant (N) Peter Gerald Townsend, MMM, CD  
 Captain Henry Samuel Walker, MMM, CD  
 Sergeant William Edward Walsh, MMM, CD  
 Master Warrant Officer Robert Arthur Waters, MMM, CD  
 Master Warrant Officer Chester Joseph Williams, MMM, CD  
 Captain Alvin Earl Wilson, MMM, CD  
 Warrant Officer Lorne Irwin Windsor, MMM, CD

#### **Appointed December 13, 1982**

##### **Commanders**

Brigadier-General Blake Baile, CMM, CD  
 Commodore Constantine Cotaras, CMM, CD  
 Major-General William George Paisley, CMM, CD

##### **Officers**

Lieutenant-Colonel Robert Paul Alden OMM, CD  
 Lieutenant-Colonel Edward Norman Berntson, OMM, CD  
 Captain (N) Donald George MacPhail Chown, OMM, CD  
 Major Terrence Jude Christopher, OMM, CD  
 Lieutenant-Colonel John Edward Dardier, OMM, CD  
 Captain (N) David Redford Donaldson, OMM, CD  
 Major Joseph Robert Russel Doyon, OMM, CD  
 Major Dawson Wray Einarson, OMM, CD  
 Major Hugh Lloyd King, OMM, CD  
 Chief Petty Officer First Class Frederick Gilbert McKee, OMM, CD  
 Lieutenant-Colonel Harold Edward Miskiman, OMM, CD  
 Commander Lawrence Edward Murray, OMM, CD  
 Lieutenant-Colonel James Lee Senecal, OMM, CD  
 Lieutenant-Colonel Guy Claude Tousignant, OMM, CD  
 Lieutenant-Colonel Ronald Edward Werry, OMM, CD  
 Colonel Michael Marko Zrymiak, OMM, CD

##### **Members**

Warrant Officer David Edward Bamford, MMM, CD  
 Master Warrant Officer John Alvero Berman, MMM, CD  
 Chief Warrant Officer Dennis William George Burke, MMM, CD  
 Chief Warrant Officer Rennie Gregory Doll, MMM, CD  
 Sergeant Elizabeth Jean Fox, MMM, CD

Corporal Joseph François Gasse, MMM, CD  
 Captain Donald Alexander Gunn, MMM, CD  
 Chief Warrant Officer Thomas George Jacob, MMM, CD  
 Warrant Officer Robert Malcolm Kennedy, MMM, CD  
 Chief Warrant Officer Richard William Kidd, MMM, CD  
 Chief Warrant Officer John Ronald Knaption, MMM, CD  
 Master Warrant Officer Joseph Paul Ronald Landry, MMM, CD  
 Master Warrant Officer Donald George LeMoine, MMM, MM, CD  
 Chief Warrant Officer Joseph Adalbert Fernand Léonard, MMM, CD  
 Warrant Officer Donald Kenneth MacDonald, MMM, CD  
 Master Warrant Officer Donald Alfred Magee, MMM, CD  
 Master Warrant Officer Benjamin Budrow Mahar, MMM, CD  
 Chief Petty Officer First Class Lester Alexander Mansfield, MMM, CD  
 Master Warrant Officer Alexander Farrell Martin, MMM, CD  
 Master Warrant Officer Donald Neil Maxwell, MMM, CD  
 Captain Helen Patricia McCallum, MMM, CD  
 Sergeant Michael George McInnis, MMM, CD  
 Master Warrant Officer Robert Charles McMinn, MMM, CD  
 Master Warrant Officer Mervin Eric Nicholls, MMM, CD  
 Chief Warrant Officer Donald Alden Pilon, MMM, CD  
 Captain John Albert Poole, MMM, CD  
 Captain Jack Beverley Senko, MMM, CD  
 Warrant Officer Joseph Léonard Simard, MMM, CD  
 Master Warrant Officer Yvon Roger St-Aubin, MMM, CD  
 Chief Warrant Officer Andrew Wright Swan, MMM, CD  
 Chief Warrant Officer Joseph Jean-Pierre Raymond Trudeau, MMM, CD  
 Master Warrant Officer Ralph William Verge, MMM, CD  
 Master Warrant Officer Francis Robert Weir, MMM, CD  
 Chief Petty Officer First Class Leslie Andrew Williams, MMM, CD

#### **BRAVERY DECORATIONS**

**Appointed March 8, 1982**

##### **Medal of Bravery**

Frank Andrew Armstrong, MB  
 William Charles Bier, MB  
 Edward Earl Bowman, MB  
 James Arthur Catto Jr., MB  
 Constable Donald Guy Clark, MB  
 William Michael Doran, MB  
 Roger Guay, MB  
 Fire Chief Gerald John Jurgens, MB  
 Cory McCallum, MB  
 Paul Prysiazniuk, MB

Lorne Albert Simpson, MB  
 Thomas Saverio Tedesco, MB  
 George Theodore Tschida, MB  
 Wayne Russell Whitbread, MB

**Appointed April 13, 1982**

**Star of Courage**

Edward David George Button, SC  
 Benoît Chabot, SC  
 George R. Smith, SC  
 James Joseph Wadden, SC

**Medal of Bravery**

Roderick Bruce Anderson, MB  
 Dr. Timothy Robert Birkhead, MB  
 Mildred Byrne, MB  
 H. Peter B. Dean, MB  
 James Dilworth, MB  
 Robert Charles Forbes II, MB  
 Jean Grandmaison, MB  
 Glynn Richard Green, MB  
 Erick Pearce Greene, MB  
 Sea Cadet Michael G. Hilton, MB  
 Dorothy E. Hughes, MB  
 Patrick Ryan, MB

**Appointed June 7, 1982**

**Cross of Valour**

Anna Lang, CV

**Star of Courage**

Dale Cameron Schive, SC  
 Lieutenant Michael J. Maxwell, SC  
 Jackie Chaisson, SC  
 Eric Sparks, SC  
 Mark Duxtater, SC  
 Ron Duxtater, SC

**Medal of Bravery**

Fire Chief Robert Kibbons, MB  
 Dorlene Doskas, MB  
 Kenny Doskas, MB  
 Rolland Picard, MB  
 Antonio Rosati, MB  
 Bruce Humphrey, MB

**Appointed July 26, 1982**

**Star of Courage**

Roy Flake, SC  
 Captain Keith Trevor Gathercole, SC, OMM, CD  
 Master Corporal Donald Stephen Gledhill, SC  
 William George Ivany, SC  
 Constable Bruce Norman, SC  
 Constable Charles Reed, SC  
 Corporal Craig Douglas Seager, SC  
 Thomas Warren, SC

**Medal of Bravery**

Michel Bilodeau, MB  
 Paul Butcher, MB  
 David Churm, MB  
 Gordon Clark, MB  
 Frank Czukar, MB  
 Steve Ditmore, MB  
 Gaétan Fortin, MB  
 James Redwood, MB  
 Constable James Smith, MB  
 Constable Ron Wakley, MB

**Appointed January 10, 1983**

**Star of Courage**

James Fehr, SC  
 Doreen Elinor Hewitt, SC  
 Ronald Rowe, SC  
 Keith Woleston, SC  
 Captain Thomas James Worrall, SC

**Medal of Bravery**

Frances Jean Bailey, MB  
 Frank Irving Baine, MB (deceased)  
 Michael Philip Burke, MB  
 Darla Jean Davenport, MB  
 David Downing, MB  
 Gerald I. Kool, MB  
 Sergeant John Reid, MB  
 Alexander Ullock, MB

**Appointed January 17, 1983**

**Star of Courage**

Randall Bush, SC (posthumous)  
 Private Joseph Roger Chiasson, SC  
 William George Cross, SC  
 David James Frazee, SC  
 Captain Andrew Rae, SC  
 David Lindsay Wood, SC

**Medal of Bravery**

Roy Harold Asselstine, MB  
 Kevin Augustine, MB  
 Richard Cliche, MB  
 Robert Joseph Collette, MB  
 James William Donovan, MB  
 Pierre Gagné, MB  
 François Haché, MB  
 Charles Henderson, MB  
 Douglas Stuart Kilpatrick, MB  
 Lise MacDonald, MB  
 Lloyd J. MacDonald, MB  
 Steven John Panteluk, MB  
 Robert Provost, MB  
 Charles Murray Wentzell, MB  
 John Douglas White, MB



## APPENDIX 5

# DIPLOMATIC AND CONSULAR REPRESENTATION

Canada maintains diplomatic, consular or trade representation with the following countries and organizations. This list, giving the status of representatives and their city of location, was updated to April 1984 by the Public Information Division, Department of External Affairs. More detailed information may be found in the publications *Diplomatic, consular and other representatives in Canada*, and *Canadian representatives abroad*, both published by External Affairs.

### Canadian representatives abroad

Afghanistan: Ambassador, c/o Canadian Embassy, Islamabad, Pakistan

Algeria: Ambassador, Gare Alger

Angola: Ambassador, c/o Canadian High Commission, Harare, Zimbabwe

Antigua and Barbuda: High Commissioner, c/o Canadian High Commission, Bridgetown, Barbados

Argentina: Ambassador, Buenos Aires

Australia: High Commissioner, Canberra

Austria: Ambassador, Vienna

Bahamas: High Commissioner, c/o Canadian High Commission, Kingston, Jamaica

Bahrain: Ambassador, c/o Canadian Embassy, Kuwait City, Kuwait

Bangladesh: High Commissioner, Dhaka

Barbados: High Commissioner, Bridgetown

Belgium: Ambassador, Brussels

Belize: Commissioner, c/o Canadian High Commission, Kingston, Jamaica

Benin: Ambassador, c/o Canadian High Commission, Accra, Ghana

Bermuda: Commissioner, c/o Canadian Consulate General, New York

Bolivia: Ambassador, c/o Canadian Embassy, Lima, Peru

Botswana: High Commissioner, c/o Canadian High Commission, Harare, Zimbabwe

Brazil: Ambassador, Brasilia

Britain: High Commissioner, London

Brunei: Commissioner, Kuala Lumpur, Malaysia

Bulgaria: Ambassador, c/o Canadian Embassy, Belgrade, Yugoslavia

Burma: Ambassador, c/o Canadian Embassy, Dhaka, Bangladesh

Burundi: Ambassador, c/o Canadian Embassy, Kinshasa, Zaïre.

Cameroon: Ambassador, Yaoundé

Cape Verde: Ambassador, c/o Canadian Embassy, Dakar, Senegal

Central African Republic: Ambassador, c/o Canadian Embassy, Yaoundé, Cameroon

Chad: Ambassador, c/o Canadian Embassy, Yaoundé, Cameroon

Chile: Ambassador, Santiago

China (People's Republic of): Ambassador, Chao Yang District, Peking (Beijing)

Colombia: Ambassador, Bogota

Comoros (Islands): Ambassador, c/o Canadian High Commission, Dar-es-Salaam, Tanzania

Congo: Ambassador, c/o Canadian Embassy, Kinshasa, Zaïre

Costa Rica: Ambassador, San José

Cuba: Ambassador, Ottawa

Cyprus: High Commissioner, c/o Canadian Embassy, Tel Aviv, Israel

Czechoslovakia: Ambassador, Prague

Denmark: Ambassador, Copenhagen

Djibouti: Ambassador, c/o Canadian Embassy, Addis Ababa, Ethiopia

Dominica: High Commissioner, c/o Canadian High Commission, Bridgetown, Barbados

Dominican Republic: Ambassador, c/o Canadian Embassy, Caracas, Venezuela

Ecuador: Ambassador, Quito

Egypt: Ambassador, Cairo

El Salvador: Ambassador, c/o Canadian Embassy, San José, Costa Rica

Equatorial Guinea: Ambassador, Yaoundé, Cameroon

Ethiopia: Ambassador, Addis Ababa

European Communities: European Economic Community, European Atomic Energy Community, European Coal and Steel Community, Head of Mission, Ambassador, Brussels, Belgium

Fiji: High Commissioner, c/o Canadian High Commission, Wellington North, New Zealand

Finland: Ambassador, Helsinki

France: Ambassador, Paris

Gabon: Chargé d'Affaires a.i. and Consul, Libreville

Gambia: High Commissioner, c/o Canadian Embassy, Dakar, Senegal

German Democratic Republic: Ambassador, c/o Canadian Embassy, Warsaw, Poland

Germany, Federal Republic of: Ambassador, Bonn

Ghana: High Commissioner, Accra

Greece: Ambassador, Athens

Grenada: High Commissioner, c/o Canadian High Commission, Bridgetown, Barbados

Guatemala: Ambassador, Guatemala City

Guinea: Ambassador, Conakry

Guinea-Bissau: Ambassador, c/o Canadian Embassy, Dakar, Senegal

Guyana: High Commissioner, Georgetown

Haiti: Ambassador, Port-au-Prince

Holy See: Ambassador, Rome, Italy

Honduras: Ambassador, c/o Canadian Embassy, Guatemala City, Guatemala

Hong Kong: Commissioner

Hungary: Ambassador, Budapest

Iceland: Ambassador, c/o Canadian Embassy, Oslo, Norway

India: High Commissioner, New Delhi

Indonesia: Ambassador, Jakarta

Iran: Ambassador (vacant), Consular services by the Royal Danish Embassy, Tehran

Iraq: Ambassador, c/o Canadian Embassy, Baghdad

Ireland: Ambassador, Dublin

Israel: Ambassador, Tel Aviv

Italy: Ambassador, Rome

Ivory Coast: Ambassador (vacant), Abidjan

Jamaica: High Commissioner, Kingston

Japan: Ambassador, Tokyo

Jordan: Ambassador, Amman

Kenya: High Commissioner, Nairobi

Kiribati: High Commissioner, c/o Canadian High Commission, Wellington North, New Zealand

Korea: Ambassador, Seoul

Kuwait: Ambassador, Kuwait City

Laos (Lao People's Democratic Republic): Ambassador, c/o Canadian Embassy, Bangkok, Thailand

Lebanon: Ambassador, Beirut

Lesotho: High Commissioner, c/o Canadian Embassy, Pretoria, South Africa

Liberia: Ambassador, c/o Canadian High Commission, Accra, Ghana

Libya: Ambassador, c/o Canadian Embassy, Belvédère Tunis, Tunisia

Luxembourg: Ambassador, c/o Canadian Embassy, Brussels, Belgium

Macao: Consul General, c/o Commission for Canada, Hong Kong

Madagascar: Ambassador, c/o Canadian High Commission, Dar-es-Salaam, Tanzania

Malawi: High Commissioner, c/o Canadian High Commission, Lusaka, Zambia

Malaysia: High Commissioner, Kuala Lumpur

Maldives: High Commissioner, c/o Canadian High Commission, Colombo, Sri Lanka

Mali: Ambassador (vacant), c/o Canadian Embassy, Abidjan, Ivory Coast

Malta: High Commissioner, c/o Canadian Embassy, Rome, Italy

Mauritania: Ambassador, c/o Canadian Embassy, Dakar, Senegal

Mauritius: High Commissioner, c/o Canadian High Commission, Dar-es-Salaam, Tanzania

Mexico: Ambassador, Mexico City

Monaco: Consul General, c/o Canadian Consulate General, Marseille, France

Mongolia: Ambassador, c/o Canadian Embassy, Moscow, USSR

Morocco: Ambassador, Rabat-Agdal, Maroc

Mozambique: Ambassador, c/o Canadian High Commission, Harare, Zimbabwe

Mutual and Balanced Force Reduction Talks: Head of Delegation, Ambassador, Vienna, Austria

Nepal: Ambassador, c/o Canadian High Commission, New Delhi, India

Netherlands: Ambassador, The Hague; Cur  ao: Honorary Consul, Willemstad, Cur  ao, Netherlands Antilles

New Zealand: High Commissioner, Wellington North

Nicaragua: Ambassador, c/o Canadian Embassy, San Jos  , Costa Rica

Niger: Ambassador, c/o Canadian Embassy, Abidjan, Ivory Coast

Nigeria: High Commissioner, Lagos

North Atlantic Council: Permanent Representative and Ambassador, Brussels, Belgium

Norway: Ambassador, Oslo

Oman: Ambassador, c/o Canadian Embassy, Kuwait City, Kuwait

Organization of American States: Ambassador and Permanent Observer, Washington, DC

Organization for Economic Co-operation and Development: Ambassador and Permanent Representative, Paris, France

Pakistan: Ambassador, Islamabad

Panama: Ambassador, c/o Canadian Embassy, San Jos  , Costa Rica

Papua New Guinea: High Commissioner, c/o Canadian High Commission, Canberra, Australia

Paraguay: Ambassador, c/o Canadian Embassy, Buenos Aires, Argentina

Peru: Ambassador, Lima

Philippines: Ambassador, Makati, Rizal, Manila

Poland: Ambassador, Warsaw

Portugal: Ambassador, Lisbon

Qatar: Ambassador, c/o Canadian Embassy, Kuwait City, Kuwait

Romania: Ambassador, Bucharest

Rwanda: Ambassador, c/o Canadian Embassy, Kinshasa, Zaire

Saint Lucia: High Commissioner, Bridgetown, Barbados

St. Vincent and the Grenadines: High Commissioner, c/o Canadian High Commission, Bridgetown, Barbados

Samoa: High Commissioner, c/o Canadian High Commission, Wellington North, New Zealand

San Marino: Consul, c/o Canadian Embassy, Rome, Italy

Sao Tome and Principe: Ambassador, c/o Canadian Embassy, Yaound  , Cameroon

Saudi Arabia: Ambassador, Jeddah

Senegal: Ambassador, Dakar

Seychelles: High Commissioner, c/o Canadian High Commission, Dar-es-Salaam, Tanzania

Sierra Leone: High Commissioner, c/o Canadian High Commission, Lagos, Nigeria

Singapore: High Commissioner, Singapore

Solomon Islands: High Commissioner, c/o Canadian High Commission, Canberra, Australia

Somalia: Ambassador, c/o Canadian Embassy, Jeddah, Saudi Arabia

South Africa: Ambassador, Arcadia, Pretoria

Spain: Ambassador, Madrid

Sri Lanka: High Commissioner, Colombo

Sudan: Ambassador, c/o Canadian Embassy, Cairo, Egypt

Suriname: Ambassador, c/o Canadian High Commission, Georgetown, Guyana

Swaziland: High Commissioner, c/o Canadian Embassy, Pretoria, South Africa

Sweden: Ambassador, Stockholm

Switzerland: Ambassador, Berne

Syria: Ambassador, c/o Canadian Embassy, Beirut, Lebanon

Tanzania: High Commissioner, Dar-es-Salaam

Thailand: Ambassador, Bangkok

Togo: Ambassador c/o Canadian High Commission, Accra, Ghana

Tonga: High Commissioner, c/o Canadian High Commission, Wellington North, New Zealand

Trinidad and Tobago: High Commissioner, Port of Spain

Tunisia: Ambassador, Belv  d  re, Tunis

Turkey: Ambassador, Ankara

Tuvalu: High Commissioner, c/o Canadian High Commission, Wellington North, New Zealand

Uganda: High Commissioner, c/o Canadian High Commission, Nairobi, Kenya

Union of Soviet Socialist Republics: Ambassador, Moscow

United Arab Emirates: Ambassador, c/o Canadian Embassy, Kuwait City, Kuwait

United Nations: Ambassador and Permanent Representative, New York, NY

Ambassador and Permanent Representative, Permanent Mission of Canada to the Office of the United Nations at Geneva, and to the Conference of the Committee on Disarmament, Geneva

Ambassador and Permanent Representative, Permanent Mission of Canada to the Secretariat of the General Agreement on Tariffs and Trade, Geneva

Note: The Permanent Mission in Geneva is accredited to the United Nations Specialized Agencies having their headquarters in Geneva: International Labour Organization (ILO); International Telecommunications Union (ITU); World Health Organization (WHO); World Meteorological Organization (WMO); World Intellectual Property Organization (WIPO)

Permanent Representative, Permanent Mission of Canada to the United Nations Environment Program, Nairobi

Ambassador and Permanent Delegate, Permanent Delegation of Canada to the United Nations Educational, Scientific and Cultural Organization, Paris

Permanent Representative, Permanent Mission of Canada to the Food and Agriculture Organization, Rome

Permanent Representative, Permanent Mission of Canada to the United Nations Industrial Development Organization, Vienna

Permanent Representative, Permanent Mission of Canada to the International Atomic Energy Agency, Vienna

Note: Canada is also a member of the following UN Specialized Agencies to which there are no accredited permanent representatives: Universal Postal Union (UPU), Berne; Inter-governmental Maritime Consultative Organization (IMCO), London; International Bank for Reconstruction and Development (IBRD), Washington; International Finance Corporation (IFC), Washington; International Development Agency (IDA), Washington; International Monetary Fund (IMF), Washington.

United States of America: Ambassador, Washington; consuls general, Atlanta, Boston, Buffalo, Chicago, Cleveland, Dallas, Detroit, Los Angeles, Minneapolis, New Orleans, New York, Philadelphia, San Francisco and Seattle

Upper Volta: Ambassador, c/o Canadian Embassy, Abidjan, Ivory Coast

Uruguay: Ambassador, c/o Canadian Embassy, Buenos Aires, Argentina

Vanuatu: High Commissioner, c/o Canadian High Commission, Canberra, Australia

Venezuela: Ambassador, Caracas

Vietnam: Ambassador, c/o Canadian Embassy, Bangkok, Thailand

West Indies Associated States and Montserrat: Commissioner, c/o Canadian High Commission, Bridgetown, Barbados

Yemen Arab Republic: Ambassador, c/o Canadian Embassy, Jeddah, Saudi Arabia

Yemen, People's Democratic Republic of: Ambassador, c/o Canadian Embassy, Jeddah, Saudi Arabia

Yugoslavia, Socialist Federal Republic of: Ambassador, Belgrade

Zaire, Republic of: Ambassador, Kinshasa

Zambia: High Commissioner, Lusaka

Zimbabwe: High Commissioner, Harare

### **Representatives of foreign countries in Canada**

Algeria: Ambassador, Ottawa

Antigua and Barbuda: High Commissioner, Ottawa

Argentina: Ambassador, Ottawa

Australia: High Commissioner, Ottawa

Austria: Ambassador, Ottawa

Bahamas: High Commissioner, Washington

Bahrain: Ambassador, Washington

Bangladesh: High Commissioner, Ottawa

Barbados: High Commissioner, Ottawa

Belgium: Ambassador, Ottawa

Benin: Ambassador, Ottawa

Bolivia: Ambassador, Ottawa

Botswana: High Commissioner, c/o Embassy of Botswana, Washington

Brazil: Ambassador, Ottawa

Britain: High Commissioner, Ottawa

Bulgaria: Ambassador, Ottawa

Burma: Ambassador, Washington

Burundi: Ambassador, Ottawa

Cameroon: Ambassador, Ottawa

Cape Verde: Ambassador, Washington

Central African Republic: Ambassador, Washington

Chad: Ambassador, Washington

Chile: Ambassador, Ottawa

China, People's Republic of: Ambassador, Ottawa

Colombia: Ambassador, Ottawa

Congo: Ambassador, c/o Permanent Mission of the Congo to the United Nations, New York

Costa Rica: Ambassador, Ottawa

Cuba: Ambassador, Ottawa

Cyprus: High Commissioner, c/o Embassy of Cyprus, Washington

Czechoslovakia: Ambassador, Ottawa

Denmark: Ambassador, Ottawa

Djibouti: Honorary Consul, Montréal

Dominican Republic: Ambassador, Washington

Ecuador: Ambassador, Ottawa

Egypt, Arab Republic of: Ambassador, Ottawa

El Salvador: Ambassador, Ottawa

Ethiopia: Ambassador, New York

Fiji: High Commissioner, New York

Finland: Ambassador, Ottawa

France: Ambassador, Ottawa

Gabon: Ambassador, Ottawa

Gambia: High Commissioner, Washington

German Democratic Republic: Ambassador, Washington

Germany, Federal Republic of: Ambassador, Ottawa

Ghana: High Commissioner, Ottawa

Greece: Ambassador, Ottawa

Grenada: Consul, Toronto

Guatemala: Ambassador, Ottawa

Guinea: Ambassador, Ottawa

Guinea-Bissau: Ambassador, New York

Guyana: First Secretary, Ottawa

Haiti: Ambassador, Ottawa

Holy See: Pro-Nuncio, Rockcliffe Park, Ont.

Honduras: Ambassador, Ottawa

Hungary: Ambassador, Ottawa

Iceland: Ambassador, c/o Embassy of Iceland, Washington

India: High Commissioner, Ottawa

Indonesia: Ambassador, Ottawa

Iran: Ambassador, Ottawa

Iraq: Ambassador, Ottawa

Ireland: Ambassador, Ottawa

Israel: Ambassador, Ottawa

Italy: Ambassador, Ottawa

Ivory Coast: Ambassador, Ottawa

Jamaica: High Commissioner, Ottawa

Japan: Ambassador, Ottawa

Jordan: Ambassador, Ottawa

Kenya: High Commissioner, Ottawa

Korea: Ambassador, Ottawa

Kuwait: Ambassador, c/o Embassy of Kuwait, Washington

Lao People's Democratic Republic: Ambassador, c/o Embassy of the Lao People's Democratic Republic, Washington

Lebanon: Ambassador, Ottawa

Lesotho: High Commissioner, Ottawa

Liberia: Ambassador, c/o Embassy of Liberia, Washington

Libya: Ambassador, c/o Permanent Mission of the Socialist People's Libyan Arab Jamahiriya to the United Nations, New York

Lithuania: Acting Honorary Consul General, Toronto

Luxembourg: Ambassador, c/o Embassy of Luxembourg, Washington

Madagascar: Ambassador, c/o Permanent Mission of the Democratic Republic of Madagascar to the United Nations, New York

Malawi: High Commissioner, Ottawa

Malaysia: High Commissioner, Ottawa

Mali: Ambassador, Ottawa

Malta: High Commissioner (vacant), c/o Embassy of Malta, Brussels, Belgium

Mauritania: Ambassador, c/o Permanent Mission of the Islamic Republic of Mauritania to the United Nations, New York

Mauritius: High Commissioner, c/o Embassy of Mauritius, Washington

Mexico: Ambassador, Ottawa

Monaco: Honorary Consul General, Montréal

Mongolia: Ambassador, c/o The Permanent Mission of the Mongolian Republic to the United Nations, New York

Morocco: Ambassador, Ottawa

Nepal: Ambassador, c/o Embassy of Nepal, Washington  
 Netherlands: Ambassador, Ottawa  
 New Zealand: High Commissioner, Ottawa  
 Nicaragua: Ambassador, Ottawa  
 Niger: Ambassador, Ottawa  
 Nigeria: High Commissioner, Ottawa  
 Norway: Ambassador, Ottawa  
 Oman: Ambassador, c/o Embassy of Oman, Washington  
 Pakistan: Ambassador, Ottawa  
 Panama: Honorary Consul, Edmonton  
 Papua New Guinea: High Commissioner (vacant), c/o Embassy of Papua New Guinea, Washington  
 Paraguay: Ambassador, c/o Permanent Mission of Paraguay to the OAS, Washington  
 Peru: Ambassador, Ottawa  
 Philippines: Ambassador, Ottawa  
 Poland: Ambassador, Ottawa  
 Portugal: Ambassador, Ottawa  
 Qatar: Ambassador, c/o Permanent Mission of Qatar to the United Nations, New York  
 Romania: Ambassador, Ottawa  
 Rwanda: Ambassador, Ottawa  
 Saint Christopher-Nevis: High Commissioner, Ottawa  
 Saint Lucia: High Commissioner, Ottawa  
 Saint Vincent and the Grenadines: High Commissioner, Ottawa  
 San Marino: Honorary Consul General, Montréal  
 Saudi Arabia: Ambassador, Ottawa  
 Senegal: Ambassador, Ottawa  
 Seychelles: High Commissioner, London  
 Sierra Leone: High Commissioner, Washington  
 Singapore: High Commissioner of the Republic of Singapore, New York  
 Somalia: Ambassador, Ottawa  
 South Africa: Ambassador, Ottawa

Spain: Ambassador, Ottawa  
 Sri Lanka: High Commissioner, Ottawa  
 Sudan: Ambassador, Washington  
 Suriname: Ambassador, c/o Embassy of the Republic of Suriname, Washington  
 Swaziland: High Commissioner, c/o Embassy of the Kingdom of Swaziland, Washington  
 Sweden: Ambassador, Ottawa  
 Switzerland: Ambassador, Ottawa  
 Syria: Ambassador, Washington  
 Tanzania: High Commissioner, Ottawa  
 Thailand: Ambassador, Ottawa  
 Togo: Ambassador, Ottawa  
 Trinidad and Tobago: High Commissioner, Ottawa  
 Tunisia: Ambassador, Ottawa  
 Turkey: Ambassador, Ottawa  
 Uganda: High Commissioner, Ottawa  
 Union of Soviet Socialist Republics: Ambassador, Ottawa  
 United Arab Emirates: Ambassador, New York  
 United States of America: Ambassador, Ottawa  
 Upper Volta: Ambassador, Ottawa  
 Uruguay: Ambassador, Washington  
 Venezuela: Ambassador, Ottawa  
 Vietnam: Ambassador, London  
 Western Samoa: High Commissioner, New York  
 Yemen Arab Republic: Ambassador, Washington  
 Yemen, People's Democratic Republic of: Ambassador, c/o Permanent Mission of the People's Democratic Republic of Yemen, New York  
 Yugoslavia: Ambassador, Ottawa  
 Zaire: Ambassador, Ottawa  
 Zambia: High Commissioner, Ottawa  
 Zimbabwe: High Commissioner, Ottawa  
 Delegation of the Commission of the European Communities: Head of Delegation, Ottawa

## APPENDIX 6

# BOOKS ABOUT CANADA

This list of books about Canada, compiled by the National Library of Canada, is a selective bibliography of works in the social sciences and humanities, published during 1978-83, except for a few previously published or published in a second edition. It is intended to assist all readers interested in Canadian materials. The publications are arranged alphabetically by author or title under the following subject headings: general reference works; biography; fine arts and performing arts; linguistics and literature; country and people; sports; general history; regional history; economics; government and politics, law; sociology; education; religion; environment; science and technology. Titles are listed in the language in which they are published. This listing does not replace the national bibliography. For additional works, the reader may consult the monthly and annual compilations of *Canadiana*.

## FIRST SECTION

### General reference works

*Bibliographie sur la préhistoire de la psychiatrie canadienne au 19<sup>e</sup> siècle.* Par Viateur Dubé et al. Trois-Rivières, Qué.: Dép. de philosophie, Université du Québec à Trois-Rivières, 1976. Pagination multiple. (Recherches et théories; n° 10)

*The British Columbia Historical Quarterly: cumulative index.* A two-part index to the British Columbia Historical Quarterly, v. 1-21 (1937-58) including British Columbia Historical Association, Annual Reports and Proceedings, nos. 1-4 (1923-29). Victoria, BC: Camosun College, 1977. Unpaged.

Canada. Indian Rights Commission. Research Resource Centre. *Indian claims in Canada: supplementary bibliography/Revendications des Indiens au Canada: bibliographie supplémentaire.* Ottawa: Published for the Canadian Indian Rights Commission by the National Library of Canada, 1979, iv, 116 p. (includes English and French publications)

Canada (Province) Legislative Assembly. *Debates of the Legislative Assembly of United Canada, 1841-1867.* Montréal: Presses de l'École des hautes études commerciales, 1970-. (includes some text in French). Contents:

v.1-3, 1841-1843. Edited by Elizabeth Nish. Montréal: Presses de l'École des hautes études commerciales, 1970-72.

v.4, pt. 1-2, 1844-1845. Edited by Elizabeth Gibbs. Montréal: Presses de l'École des hautes études commerciales, 1973.

v.5, pt. 1, 1846. Edited by Elaine Naves. Montréal: Presses de l'École des hautes études commerciales, 1974.

v.5, pt. 2, 1846. Edited by Elaine Naves. Montréal: Centre de recherche en histoire économique du Canada français, 1974.

v.6, 1847. Edited by Hélène Paré. Montréal: Presses de l'École des hautes études commerciales, 1975.

v.7, 1848. Edited by Elaine Naves. Montréal: Centre de recherche en histoire économique du Canada français, 1975.

v.8-9, 1849-1850. Edited by Elizabeth Gibbs. Montréal: Centre de recherche en histoire économique du Canada français, 1976-78.

v.10, pt. 1, 1851. Edited by Elizabeth Gibbs et al. Montréal: Centre de recherche en histoire économique du Canada français, 1978.

*Canadian studies bibliographies/Bibliographies des études canadiennes.* Ottawa: Bureau of Public Affairs, Dept. of External Affairs, 1978. Various pagings (includes English and French publications)

Cantin, Pierre, Normand Harrington et Jean-Paul Hudon. *Bibliographie de la critique de la littérature québécoise dans les revues des XIX<sup>e</sup> et XX<sup>e</sup> siècles.* Ottawa: Centre de recherche en civilisation canadienne-française, 1979. 5 v. (Centre de recherche en civilisation canadienne-française. Documents de travail; 12-16)

De la Barre, Kenneth, Louise Normandeau and Seth Rankin. *Northern population bibliography-Canada/Bibliographie sur les populations nordiques canadiennes.* Prepared under auspices of the Committee on Northern Population Research. Calgary, Alta.: Arctic Institute of North America, 1978. x, 167 p. (includes English and French publications)

Dick, Trevor J.O. *Economic history of Canada: a guide to information sources.* Detroit: Gale Research, 1978. xiii, 174 p. (Economics information guide series; v. 9) (Gale information library)

*Directory of Canadian museums and related institutions/Répertoire des musées canadiens et institutions connexes.* (previous ed. published in 1976 under title: *Directory of Canadian museums/Répertoire des musées canadiens*) Ottawa: Canadian Museums Association, 1978. xxii, 248 p. (text in English and French)

Harvey, Fernand et Gilles Houle. *Les classes sociales au Canada et au Québec: bibliographie annotée*. Québec: Institut supérieur des sciences humaines, Université Laval, 1979. 282 p. (Cahiers de l'ISSH. Collection Études sur le Québec; n° 1)

Houyoux, Philippe, comp. *Bibliographie de l'histoire de l'éducation au Québec des origines à 1960*. Trois-Rivières, Qué.: Université du Québec à Trois-Rivières, 1978. viii, 227 p. (Bibliothèque. Publication; n° 18)

Lakos, Amos, comp. *Comparative provincial politics of Canada: a bibliography of select periodical articles, 1970-1977*. Waterloo, Ont.: University of Waterloo Library, 1978. iii, 67 p. (University of Waterloo Library bibliography; no. 2)

Larouche, Irma. *National Library of Canada: a bibliography/Bibliothèque nationale du Canada: une bibliographie*. Ottawa: Reference and Bibliography Section, National Library of Canada, 1979. xxiii, 179 p. (includes English and French publications)

Mackey, William Francis. *Le bilinguisme canadien: bibliographie analytique et guide du chercheur*. Québec: (Centre international de recherche sur le bilinguisme, 1978. 603, ix p. Centre international de recherche sur le bilinguisme. Publication; B-75)

Morin, Cimon N. *Canadian philately: bibliography and index/Philatélie canadienne: bibliographie et index, 1864-1973*. Ottawa: National Library of Canada, 1979. xxi, 281 p. (includes English and French publications)

National Library of Canada. *Canadian subject headings*. Ottawa: National Library of Canada, 1978. xxxv, 395 p. (Prefatory material in English and French. The list of subject headings is followed by an English-to-French index and a French-to-English index/Pages liminaires en français et en anglais. La liste des vedettes-matière est suivie d'un index anglais-français et d'un index français-anglais)

—. *Class PS8000: a classification for Canadian literature*. 2nd ed. By Thomas R. McCloy. Ottawa: National Library of Canada, 1978. x, 21 p. (issued also in French)

—. Resources Survey Division. *Research collections in Canadian libraries*. By A. MacNab and M. Hood. Ottawa: National Library of Canada, 1978. 2 v. (Special studies II: Fine arts library resources in Canada; 6) (issued also in French)

*Ontario's heritage: a guide to archival resources*. v.1- . General editor, Victor Russell. Toronto: Toronto Area Archivists Group; Cheltenham, Ont.: Boston Mills Press, 1978- .

Public Archives of Canada. National Ethnic Archives Section. *A guide to sources for the study of Canadian Jewry/Guide des sources d'archives sur les juifs canadiens*. By Lawrence F. Tapper. Ottawa: National Ethnic Archives, Public Archives of Canada, 1978. 51 p. (text in English and French)

—. Public Records Division. *Historical records of the Government of Canada/Documents historiques du gouvernement du Canada*. By Terry Cook and Glenn T. Wright.

Ottawa: Public Records Division, Public Archives of Canada, 1978. v, 59, 61, v p. (text in English and French on inverted pages)

Pye, Charles H., Noel Roy and W.E. Schrank, comps. *Index of postconfederation Newfoundland economic data: preliminary version*. St. John's, Nfld., Memorial University of Newfoundland, 1978. 28 v.

Québec. Assemblée législative. *Débats de l'Assemblée législative*. v.-. Texte établi par Marcel Hamelin. Québec: Assemblée nationale du Québec, Journal des débats, 1974-. (comprend du texte en anglais) Sommaire 1<sup>e</sup> Législature, sessions 1-4, 1867-1870. 1974. 1 v. en pagination multiple

2<sup>e</sup> Législature, sessions 1-4, 1871-1875. 1976. 1 v. en pagination multiple

3<sup>e</sup> Législature, sessions 1-3, 1875-1878. 1977. 1 v. en pagination multiple

*Recherches sociographiques: index des volumes 1 à 17, 1960-1976*. Établi par Jean Bourassa. Québec: Institut supérieur des sciences humaines, Université Laval, 1978. iii, 118 p. (Cahiers de l'ISSH. Collection Instruments de travail; n° 21)

*Relations extérieures du Canada et du Québec: bibliographie*. v.1- . Sous la direction de Paul Painchaud. Québec: Centre de relations internationales, 1978- .

*Saskatchewan history: index: v. 1 to v. 30, 1948-1977*. Regina; Saskatoon, Sask.: Saskatchewan Archives Board, 1978. ii, 132 p.

Tennyson, Brian D., ed. *Cape Breton: a bibliography*. Halifax: Dept. of Education, 1978. vi, 114 p.

## Biography

Bliss, Michael. *A Canadian millionaire: the life and business times of Sir Joseph Flavelle, Bart., 1858-1939*. Toronto: Macmillan of Canada, 1978. xii, 562 p.

*The capital list: a biographical record of leadership in the Nation's Capital*. v.- . Edited by Terrence McLaughlin and Malcolm Thorne. Ottawa: The Capital List, 1978- .

Caron, Roger. *Go boy!: Memoirs of a life behind bars*. Scarborough: McGraw-Hill Ryerson, 1978. xiii, 264 p.

Chaput, Hélène. *Donatien Frémont, journaliste de l'Ouest canadien*. Saint-Boniface, Man.: Éditions du Blé, 1977. 227 p. (Collection Soleil)

Flanagan, Thomas. *Louis David Riel: prophet of the new world*. Toronto: University of Toronto Press, 1979. ix, 216 p.

Fraser, Esther. *Wheeler*. (Arthur Oliver Wheeler). Banff, Alta.: Summerthought Pub., 1978. 164 p.

Giguère, Georges-Émile. *Lionel Groulx: biographie*. Montréal: Éditions Bellarmin, 1978. 159 p.

Gilbert, Heather. *The life of Lord Mount Stephen. I: Awakening continent, 1829-1891; II: The end of the road,*

1891-1921. Aberdeen: Aberdeen University Press, 1976-77. 2 v.

Hustak, Allan. *Peter Lougheed: a biography*. Toronto: McClelland and Stewart, 1979. 251 p.

Laliberté, Alfred. *Mes souvenirs*. Présenté par Odette Legendre. Montréal: Éditions du Boréal express, 1978. 270 p. (Collection Témoins et témoignages)

Le Pan, Douglas. *Bright glass of memory: a set of four memoirs*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 245 p.

Lévesque, Robert et Robert Migner. *Camillien et les années vingt, suivi de Camillien au goulag: cartographie du Houdisme*. Montréal: Éditions des Brûlé, 1978. 183 p. (Les Boss politiques à Montréal)

Lionel Groulx: 100<sup>e</sup> anniversaire de sa naissance, 1878-1978. Montréal: Institut d'histoire de l'Amérique française, 1978. 325-530 p. (Revue d'histoire de l'Amérique française, v. 32, n° 3, décembre 1978)

Massey, Raymond. *A hundred different lives: an autobiography*. Toronto: McClelland and Stewart, 1979. 447 p.

Norcross, Elizabeth Blanche. *Pioneers every one: Canadian women of achievement*. Don Mills, Ont.: Burns & MacEachern, 1979. 159 p.

Paquette, Albiny. *Hon. Albiny Paquette: soldat, médecin, maire, député, ministre: 33 années à la Législature de Québec: souvenirs d'une vie de travail et de bonheur*. . . s.l.: s.n., 1977? 346 p.

Penfield, Wilder. *No man alone: a neurosurgeon's life*. Boston; Toronto: Little, Brown, 1977. xv, 398 p.

Radwanski, George. *Trudeau*. Toronto: Macmillan of Canada, 1978. xii, 372 p.

Rohmer, Richard. *E.P. Taylor: the biography of Edward Plunket Taylor*. Toronto: McClelland and Stewart, 1978. 355 p.

Sutherland, Alice Gibson. *Canada's aviation pioneers: 50 years of McKee trophy winners*. Scarborough, Ont.: McGraw-Hill Ryerson, 1978. xiii, 304 p.

Swainson, Donald. *Macdonald of Kingston: first prime minister*. Toronto: Personal Library; Don Mills, Ont.: T. Nelson, 1979. 176 p. (Canada's heritage in pictures)

Tuck, Robert C. *Gothic dreams: the life and times of a Canadian architect William Crichlow Harris, 1854-1913*. Toronto: Dundurn Press, 1978. 252 p.

Wyczynski, Paul and Pierre Savard. *François-Xavier Garneau/François-Xavier Garneau, 1809-1866*. Ottawa: National Library of Canada, 1977. 80, 80 p. (text in English and French on inverted pages)

#### Fine arts and performing arts

Albani, Emma. *Forty years of song*. With a discography by W.R. Moran. New York: Arno Press, 1977. 285, v p. (Opera biographies)

*L'animation de l'Office national du film*. Montréal: Office des communications sociales, 1978. 171 p. (Séquences: revue de cinéma, n° 91, janvier 1978)

Bélanger, Léon-H. *Les Ouimetoscopes: Léo-Ernest Ouimet et les débuts du cinéma québécois*. Montréal-Nord: VLB, 1978. 247 p.

Borduas, Paul-Emile. *Paul-Emile Borduas: writings/Ecrits, 1942-1958*. Edited by François-Marc Gagnon. English translation by François-Marc Gagnon and Dennis Young. Halifax: Press of the Nova Scotia College of Art, 1978. 160 p. (The Nova Scotia series: Source materials of the contemporary arts) (text in English and French)

*Canadian children's drama & theatre*. Edited by John R. Sorfleet. Guelph, Ont.: Canadian Children's Press, 1978. 151 p.

Detroit Institute of Arts. *Quebec and related silver at the Detroit Institute of Arts: [catalogue]*. By Ross Allan C. Fox. Detroit, Mich.: Published for Founders Society, Detroit Institute of Arts, Wayne State University Press, 1978. 174 p.

Foss, Charles H. and Richard Vroom. *Cabinetmakers of the eastern seaboard: a study of early Canadian furniture*. Toronto: M.F. Feheley, 1977. ix, 156p.

Gagnon, François-Marc. *Paul-Emile Borduas, 1905-1960: biographie critique et analyse de l'oeuvre*. Montréal: Fides, 1978. xv, 560 p.

Harris, Lawren. *Lawren S. Harris: urban scenes and wilderness landscapes, 1906-1930: Art Gallery of Ontario, January 14 - February 26, 1978*. By Jeremy Adamson. Toronto: Art Gallery of Ontario, 1978. 231 p.

House, Maria Newberry. *Plantae occidentalis: 200 years of botanical art in British Columbia. Ethnobotanical commentaries on plants in the exhibition*. By Susan Munro. Vancouver: Botanical Garden, University of British Columbia Press, 1979. xv, 116 p. (The Botanical Garden. Technical bulletin; no. 11)

Huot, Cécile. *Entretiens avec Omer Létourneau*. Montréal: Quinze, 1979. 232 p.

*John Grierson, film master*. Compiled by James Beveridge. New York: Macmillan; London: Collier Macmillan, 1978. xix, 361 p.

Laframboise, Philippe. *La Poune*. Montréal: Éditions Héritage, 1978. 139 p.

La France, Micheline. *Denise Pelletier: ou, La folie du théâtre*. Montréal: Éditions Scriptomedia, 1979. 229 p.

Lemieux, Irénée. *Artistes du Québec*. Québec: Éditions I. Lemieux, 1974; Éditions La Minerve, 1978. 2 v.

MacDonald, James E.H. *The tangled garden*. Text by Paul Duval. Scarborough, Ont.: Cerebrus: Prentice-Hall of Canada, 1978. 186 p.

Morris, Peter. *Embattled shadows: a history of Canadian cinema, 1895-1939*. Montréal: McGill-Queen's University Press, 1978. 350 p.

National Museum of Man. *The Inuit print: a travelling exhibition of the National Museum of Man, National Museums of Canada and the Department of Indian and Northern Affairs/L'estampe inuit: une exposition itinérante du Musée national de l'homme, Musées nationaux du Canada et du Ministère des Affaires indiennes et du Nord*. By Helga Goetz. Ottawa: National Museum of Man, National Museums of Canada, 1977. 267 p. (text in English and French)

Pain, Howard. *The heritage of Upper Canadian furniture: a study in the survival of formal and vernacular styles from Britain, America and Europe, 1780-1900*. Scarborough, Ont.: Van Nostrand Reinhold, 1978. 548 p.

Painchaud, Nicole Tardif-. *Dom Bellot et l'architecture religieuse au Québec*. Québec: Presses de l'Université Laval, 1978. xxi, 262 p.

Petrie, Juliette. *Quand on revoit tout ça'* Propos de Juliette Petrie recueillis par Jean Leclerc. Montréal: Productions Vieux rêves, 1977. 223 p.

Porter, John R. *The works of Joseph Légaré, 1795-1855: catalogue raisonné*. With the collaboration of Nicole Cloutier and Jean Trudel. Ottawa: National Gallery of Canada, 1978. 160 p. (issued also in French)

Québec. Ministère des Affaires culturelles. *Les armuriers de la Nouvelle-France*. Par Russel Bouchard. Québec: Ministère des Affaires culturelles, 1978. 159 p. (Civilisation du Québec: Série arts et métiers; 21)

—Ministère des Affaires culturelles. Direction générale du patrimoine. *Les maîtres-potiers du bourg Saint-Denis, 1785-1888*. Par Michel Gaumond et Paul-Louis Martin. Québec: Direction générale du patrimoine, Ministère des Affaires culturelles, 1978. 180 p. (Les Cahiers du patrimoine: 9)

—Musée du Québec. *L'art du Québec au lendemain de la Conquête, 1760-1790: une exposition préparée par le Musée du Québec*. Québec: Ministère des Affaires culturelles, 1977. 141 p.

*16 Quebec painters and their milieu*. Edited by Andrée Paradis. English translation by Mildred Grand, Eithne Bourget and Joan Thornley. Montréal: Vies des arts, 1978. 171 p. (A Survey of creators)(issued also in French)

Robert, Guy et Michel Bigué. *La peinture du Québec depuis ses origines*. Sainte-Adèle, Qué.: Iconia, 1978. 221 p.

Smiley, Barbara, comp. *Illustrators of Canadian books for young people*. Toronto: Ministry of Culture and Recreation, 1979. 49 p.

Stewart, Hilary. *Looking at Indian art of the northwest coast*. Vancouver: Douglas & McIntyre, 1979. 111 p.

Street, David and David Mason. *Karen Kain: lady of dance*. Scarborough, Ont.: McGraw-Hill Ryerson, 1978. 127 p.

*Who does what: a guide to national arts associations, service organizations and unions: a handbook of the Canadian conference of the Arts/Les services: guide choisi des asso-*

*ciations nationales, organismes de services, unions et syndicats du monde artistique: répertoire de la Conférence canadienne des arts*. (First published in 1977 in English only) Toronto: Canadian Conference of the Arts, 1978-79. 132, 144 p. (CCA Handbook series) (text in English and French on inverted pages)

Wyman, Max. *The Royal Winnipeg Ballet, the first forty years*. Toronto: Doubleday Canada, 1978. viii, 275 p.

### Linguistics and literature

*Anthologie de la poésie québécoise du 19<sup>e</sup> siècle, 1790-1890*. Sous la direction de John Hare. Montréal: Hurtubise HMH, 1979. 410 p. (Cahiers du Québec; 44: Collection Textes et documents littéraires)

*Anthologie de textes littéraires acadiens, [1606-1975]* Par Marguerite Maillet, Gérard LeBlanc et Bernard Emont. Moncton, N.-B.: Éditions d'Acadie, 1979. 643 p.

*Aurora: new Canadian writing: 1978*. Edited by Morris Wolfe. Toronto: Doubleday Canada, 1978. 239 p.

Birdsall, Peter and Delores Broten. *Mind war: book censorship in English Canada*. Victoria, BC: CANLIT, 1978. 66 p.

*Canada*. Special editor: Richard J. Schoeck. New York: Published for the Council on National Literatures by Griffin House Pubs., 1977. 164 p. (Review of national literatures; v. 7)

*The Canadian novel*. v.1-. Edited by John Moss. Toronto: NC Press, 1978-.

Capone, Giovanna. *Canada, il villaggio della terra: letteratura canadese di lingua inglese*. Bologna: Pàtron Editore, 1978. 213 p. (Sezione di letteratura inglese, angloamericana, e letterature anglofone; 1)

*A collection of Canadian plays*. Toronto: Bastet Books, 1972-78. 5 v.

*Crossing frontiers: papers in American and Canadian western literature*. Edited by Dick Harrison. Edmonton: University of Alberta Press, 1979. 174 p.

Dionne, René. *Antoine Gérin-Lajoie: homme de lettres*. Sherbrooke, Qué.: Éditions Naaman, 1978. 434 p. (Études; 16)

Dooley, David J. *Moral vision in the Canadian novel*. Toronto: Clarke, Irwin, 1979. xiii, 184 p.

Ducrocq-Poirier, Madeleine. *The roman canadien de langue française de 1860 à 1958: recherche d'un esprit romanesque*. Paris: A.G. Nizet, 1978. 908 p.

Gobin, Pierre. *Le fou et ses doubles: figures de la dramaturgie québécoise*. Montréal: Presses de l'Université Laval, 1978. 263 p. (Collection "Lignes québécoises" sérielles)

Godin, Jean-Cléo et Laurent Mailhot. *Le théâtre québécois*. Montréal: Hurtubise HMH, 1970-80. 2 v.

*The human elements: critical essays*. Edited by David Helwig. Ottawa: Oberon Press, 1978. 163 p.

Lemieux, Pierre-Hervé. *Entre songe et parole: structure du Tombeau des rois d'Anne Hébert*. Ottawa: Éditions de l'Université d'Ottawa, 1978. 249 p. (Cahiers du Centre de recherche en civilisation canadienne-française; 15)

Marchand, Jacques. *Claude Gauvreau, poète et mythocrate: essai*. Montréal-Nord: VLB, 1979. 443 p.

Marshall, Tom. *Harsh and lovely land: the major Canadian poets and the making of a Canadian tradition*. Vancouver: University of British Columbia Press, 1978. xiv, 184 p.

Massicotte, Micheline. *Le parler rural de l'Île-aux-Grues (Québec): documents lexicaux*. Québec: Presses de l'Université Laval, 1978. 554 p. (Langue française au Québec: 3<sup>e</sup> section, Lexicologie et lexicographie; 6)

Nepveu, Pierre. *Les mots à l'écoute: poésie et silence chez Fernand Ouellette, Gaston Miron et Paul-Marie Lapointe*. Québec: Presses de l'Université Laval, 1979. 292 p. (Vie des lettres québécoises; 17)

Pageau, René. *Rencontres avec Simone Routier*. Suivies des *Lettres d'Alain Grandbois*. Joliette, Qué.: Éditions de la Parabole, 1979. 219 p.

### Country and people

Anderson, Allan and Betty Tomlinson. *Greetings from Canada: an album of unique Canadian postcards from the Edwardian era, 1900-1916*. Toronto: Macmillan of Canada, 1978. xviii, 188 p.

Baldwin, Alice Sharples. *The Price family: pioneers of the Saguenay*. s.l.: s.n., 1978. 180 p.

Baltzly, Benjamin. *Benjamin Baltzly: photographs and journal of an expedition through British Columbia, 1871*. Edited by Andrew Birrell. Toronto: Coach House Press, 1978. 159 p.

Bates, Christina. *Out of the old Ontario kitchens: a collection of traditional recipes of Ontario and the stories of the people who cooked them*. Toronto: Pagurian Press, 1978. 190 p. (A Christopher Ondaatje publication)

*Canada: the treasure and the challenge*. Montréal: Reader's Digest Association (Canada), 1978. 319 p.

Canadian Oral History Association. *Folklore and oral history: papers from the second annual meeting of the Canadian Aural/Oral History Association, at St. John's, Newfoundland, October 3-5, 1975*. Edited by Neil V. Rosenberg. St. John's, Nfld.: Memorial University of Newfoundland, 1978. xx, 101 p. (Memorial University of Newfoundland folklore and language publications; 5) (Bibliographical and special series; no. 3)

*Chansons à répondre du Manitoba*. Recueillies et commentées par Marcien Ferland. Saint-Boniface, Man.: Éditions du Blé, 1979. xviii, 218 p.

Chouinard, Yvan. *Disciple de Saint Crépin: René Simard, artisan-cordonnier*. Québec: Ministère des Affaires culturelles, 1977. 144 p. (Civilisation du Québec: Série Arts et métiers; n° 19)

Clarke, Wayne, Judith Penner and George Rogers. *Cruising Nova Scotia: from Yarmouth to Canso*. Toronto: Greey de Pencier, 1979. 240 p.

*The Crystal Gardens: west coast pleasure palace*. By Pierre Berton et al. Victoria, BC: Crystal Gardens Preservation Society, 1977. 120 p.

Dempsey, Hugh A. *Charcoal's world*. Saskatoon, Sask.: Western Producer Prairie Books, 1978. ix, 178 p.

*From the farthest Hebrides/Bho na h-innse gall as iomallaiche*. Edited by Donald A. Fergusson. Gaelic editor, Aonaghus Iain MacDhomhnuil. Music editor, Jean F. Gillespie. London. Toronto: Macmillan of Canada, 1978. 321 p.

Griffiths, Bus. *Now you're logging*. Madeira Park, BC: Harbour Pub., 1978. 119 p.

Harrison, Pamela and Colin Dobson. *The first Vancouver catalogue: all the appurtenances of a civilized, amusing, and comfortable life*. Vancouver: Ensemble Publications, 1978. 269 p.

*The Harrowsmith reader: an anthology from Canada's national award winning magazine of country life and alternatives to bigness*. Edited by James Lawrence. Camden East, Ont.: Camden House, 1978. 287 p.

*Haulin' rope and gaff: songs and poetry in the history of the Newfoundland fishery*. Compiled by Shannon Ryan and Larry Small. St. John's, Nfld.: Breakwater Books, 1978. xiii, 176 p. (Folklore & folklife; 1) (Studies of the Newfoundland and Labrador fishery: Historical cultural series; 1)

Leitch, William G. *Ducks and men*. Winnipeg: Ducks Unlimited (Canada), 1978. 268 p.

Marty, Sid. *Men for the mountains*. Toronto: McClelland and Stewart, 1978. 270 p.

Montpetit, Raymond. *Le temps des Fêtes au Québec*. Montréal: Éditions de l'Homme, 1978. 285 p.

Musée national de l'homme. Centre canadien d'études sur la culture traditionnelle. *Le fournil: un rite saisonnier*. Par Lise Boily-Blanchette. Ottawa: Musées nationaux du Canada. 1976. iii, 59 p. (Centre canadien d'études sur la culture traditionnelle. Dossier; n° 16) (Collection Mercure)

National Museum of Man. Canadian Centre for Folk Culture Studies. *Traditional Doukhobor folkways: an ethnographic and biographic record of prescribed behaviour*. By Koozma J. Tarasoff. Ottawa: National Museums of Canada. 1977. xxviii, 396 p. (Canadian Centre for Folk Culture Studies. Paper; no. 20) (Mercury series)

*Québec*. Montréal: Société d'édition de la revue Forces, 1978. 128 p. (Forces, n° 43, 2<sup>e</sup> trimestre 1978)

Sugino, Shin and Jon Whyte. *The Rockies: high where the wind is lonely*. Agincourt, Ont.: Gage Pub., 1978. 85 p.

*Victor Barbeau: hommages et tributs*. Montréal: Fides, 1978. 191 p. (Cahiers de l'Académie canadienne-française; 15)

*West coast song book.* Compiled and produced by Jim Brown and Annette Kozlowski. Vancouver: Blue Mountain Books, 1978. 142 p.

## Sports

Lévesque, Eugénie et Jean Sylvain. *Paroïs d'escalade au Québec.* Québec: Fédération québécoise de la montagne: Haut-Commissariat à la jeunesse, aux loisirs et aux sports, 1978. vi, 385 p. (Collection des Guides pratiques)(La Documentation québécoise)

Russell, Burton. *Great moments in Nova Scotia sports.* Kentville, NS: B. Russell, 1978. 196 p.

Whitehead, Eric. *Cyclone Taylor: a hockey legend.* Toronto: Doubleday Canada; Garden City, NY: Doubleday, 1977. 205 p.

## General history

Basham, Richard Dalton. *Crisis in blanc and white: urbanization and ethnic identity in French Canada.* Boston: G.K. Hall; Cambridge, Mass.: Schenkman Pub., 1978. x, 287 p.

Canada. Dept. of Indian and Northern Affairs. *Captain J.E. Bernier's contribution to Canadian sovereignty in the Arctic.* By Yolande Dorion-Robitaille. Ottawa: Dept. of Indian and Northern Affairs, 1978. 110 p. (issued also in French)

Cartier, Jacques. *Voyages en Nouvelle-France.* Texte remis en français moderne par Robert Lahaise et Marie Couturier. Montréal: Hurtubise HMH, 1977. 158 p. (Cahiers du Québec; 32: Collection Documents d'histoire)

Diubaldo, Richard J. *Stefansson and the Canadian Arctic.* Montréal: McGill-Queen's University Press, 1978. xii, 274 p.

*European settlement and development in North America: essays on geographical change in honour and memory of Andrew Hill Clark.* Edited by James R. Gibson. Toronto: University of Toronto Press, 1978. viii, 230 p. (University of Toronto, Dept. of Geography. Research publications; 15)

MacLaren, Roy. *Canadians on the Nile, 1882-1898: being the adventures of the voyageurs on the Khartoum relief expedition and other exploits.* Vancouver: University of British Columbia Press, 1978. xix, 184 p.

Mitchell, Miriam C. and Florence C. Deacon, comps. *641: a story of the Canadian Red Cross Corps, overseas.* s.l.: s.n., 1978. 190 p.

National Museum of Man. History Division. *Approaches to native history in Canada: papers of a conference held at the National Museum of Man, October, 1975.* Edited by D.A. Muise. Ottawa: National Museums of Canada, 1977. 131 p. (History Division. Paper; no. 25) (Mercury series)

Senior, Hereward. *The Fenians and Canada.* Toronto: Macmillan of Canada, 1978. viii, 176 p.

*Voyage au Canada fait depuis l'an 1751 à 1761.* Par J.-C. B. (Attribué à J.C. Bonnefons ou J.C. Bradier) Paris: Aubier-Montaigne, 1978. 190 p. (Étranges étrangers)

Wright, James V. *Six chapters of Canada's prehistory.* Ottawa: Archaeological Survey of Canada, National Museum of Man, National Museums of Canada, 1976; Toronto: Van Nostrand Reinhold, 1977. 118 p. (Canadian prehistory series)

*Za chest! za slavu, za narod! Zbirnyk na zoloty iuvilei Ukraini koi strilets koi hromady v Kanadi, 1928-1978.* Redaktor, Zynovii Knys. Toronto: Vvd. Holovnoi upravly Ukraini koi strilets koi hromady v Kanadi, 1978. 639 p.

## Regional history

Arthur, Eric R. *From Front Street to Queen's Park: the story of Ontario's Parliament Buildings.* With a chapter on the "Ontario collection" by Fern Bayer. Toronto: McClelland and Stewart, 1979. 160 p.

Bourdon, Joseph. *Montréal-Matin: son histoire, ses histoires.* Montréal: La Presse, 1978. 282 p.

Canada. National Historic Parks and Sites Branch. *The Halifax Citadel, 1825-60: a narrative and structural history.* By John Joseph Greenough. Ottawa: National Historic Parks and Sites Branch, Parks Canada, Dept. of Indian and Northern Affairs, 1977. 199 p. (Canadian historic sites: Occasional papers in archaeology and history; no. 17) (issued also in French)

Cantor, George. *The Great Lakes guidebook.* v.1- . Ann Arbor, Mich.: University of Michigan Press; Rexdale, Ont.: J. Wiley, 1978- . (The complete work will comprise 3 v.)

Coish, E. Calvin. *Season of the seal: the international storm over Canada's seal hunt.* St. John's, Nfld.: Breakwater Books, 1979. v, 296 p.

Cooper, John Irwin. *Ontario's first century, 1610-1713.* Montréal: Lawrence Lande Foundation, McGill University, 1978. viii, 159 p. (Lawrence Lande Foundation for Canadian Historical Research. Pubs.; no. 14)

Dendy, William. *Lost Toronto.* Don Mills, Ont.: Oxford University Press, 1978. xv, 206 p.

Denis, Roch. *Luttes de classes et question nationale du Québec, 1948-1968.* Montréal: Presses socialistes internationales; Paris: Études et documentation internationales, 1979. 601 p.

Dion, Joseph F. *My tribe, the Crees.* Edited by Hugh A. Dempsey. Calgary, Alta.: Glenbow Museum, 1979. x, 194 p.

Dorion, Jacques. *Les écoles de rang du Québec.* Montréal: Éditions de l'Homme, 1979. 428 p.

Dupont, Jean-Claude. *Histoire populaire de l'Acadie.* Montréal: Leméac, 1978. 440 p.

Dupont, Pierre. *Guide de Montréal.* Montréal: Quinze, 1978. 299 p.

Duval, André. *Québec romantique.* Montréal: Éditions du Boréal express, 1978. 285 p.

Eid, Nadia F. *Le clergé et le pouvoir politique au Québec: une analyse de l'idéologie ultramontaine au milieu du*

19<sup>e</sup> siècle. Montréal: Hurtubise HMH, 1978. viii, 318 p. (Cahiers du Québec; 41; Collection Histoire)

Forbes, Ernest R. *The Maritime Rights movement, 1919-1927: a study in Canadian regionalism*. Montréal: McGill-Queen's University Press, 1979. x, 246 p.

Gagnon, Serge. *Le Québec et ses historiens de 1840 à 1920: la Nouvelle-France de Garneau à Groulx*. Québec: Presses de l'Université Laval, 1978. 474 p. (Les Cahiers d'histoire de l'Université Laval; 23)

Gould, Ed. *Ranching: ranching in Western Canada*. Saanichton, BC: Hancock House, 1978. 165 p.

*Habitation rurale au Québec*. Sous la direction de Jean-Claude Dupont. Montréal: Hurtubise HMH, 1978. 268 p. (Cahiers du Québec; 36; Collection Ethnologie)

*The Halifax explosion, December 6, 1917*. Compiled and edited by Graham Metson. Scarborough, Ont.: McGraw-Hill Ryerson, 1978. 173 p. (Including the complete text of *The Halifax Disaster* by Archibald MacMechan)

Knight, Rolf. *Indians at work: an informal history of native Indian labour in British Columbia, 1858-1930*. Vancouver: New Star Books, 1978. 317 p.

MacKay, Donald. *Anticosti: the untamed island*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 160 p.

MacKean, Ray and Robert Percival. *The little boats: inshore fishing craft of Atlantic Canada*. Fredericton: Brunswick Press, 1979. 109 p.

MacPhail, Duncan A. *New Kincardineshire: an intimate history of the early years of a Scottish settlement in New Brunswick*. Ottawa: s.n., 1977. viii, 132 p.

*Le Manoir Louis-Joseph-Papineau*. Par Lysiane Gagnon et al. Saint-André-Avellin, Qué.: Éditions de la Petite-Nation, 1978. 93 p. (Collection Patrimoine; 1)

Mountain Horse, Mike. *My people the Bloods*. Edited by Hugh A. Dempsey. Calgary, Alta.: Glenbow-Alberta Institute; Standoff, Alta.: Blood Tribal Council, 1979. xi, 146 p.

Moussette, Normand. *En ces lieux que l'on nomma "La Chine" . . . : premiers volets d'une recherche touchant plus de trois siècles d'histoire*. Lachine, Qué.: Cité de Lachine, 1978. 177 p.

National Museum of Man. Canadian Centre for Folk Culture Studies. *The Kalderas in Eastern Canada*. By Matt T. Salo and Sheila M.G. Salo. Ottawa: National Museums of Canada, 1977. 273 p. (Canadian Centre for Folk Culture Studies. Paper; no. 21) (Mercury series)

—.Canadian Centre for Folk Culture Studies. *Structural changes of two Chinese communities in Alberta, Canada*. By Ban Seng Hoe. Ottawa: National Museums of Canada, 1976. xiv, 385 p. (Canadian Centre for Folk Culture Studies. Paper; no. 19) (Mercury series)

—.History Division. *West coast logging, 1840-1910*. By Mary Shakespeare and Rodney H. Pain. Ottawa: National

Museums of Canada, 1977. iv, 84 p. (History Division. Paper; no. 22) (Mercury series)

Piniuta, Harry. *Land of pain, land of promise: first person accounts by Ukrainian pioneers, 1891-1914*. Research and translation by Harry Piniuta. Saskatoon, Sask.: Western Producer Prairie Books, 1978. 225 p.

Québec. Ministère des Affaires culturelles. Direction générale du patrimoine. *Monuments et sites historiques du Québec*. Compilé par Marie-Thérèse Thibault. Québec: Direction générale du patrimoine, Ministère des Affaires culturelles, 1978. 250 p. (Les Cahiers du patrimoine; 10)

Segger, Martin and Douglas Franklin. *Victoria: a primer for regional history in architecture*. Watkins Glen, NY: A Pilgrim Guide to Historic Architecture; Victoria, BC: Heritage Architectural Guides, 1979. 377 p.

*The settlement of the West*. Edited by Howard Palmer. Calgary, Alta.: University of Calgary: Comprint Pub., 1977. 271 p.

Speisman, Stephen A. *The Jews of Toronto: a history to 1937*. Toronto: McClelland and Stewart, 1979. 380 p.

Such, Peter. *Vanished peoples: the archaic Dorset and Beothuk people of Newfoundland*. Toronto: NC Press, 1978. 94 p.

*Ten historic towns: [heritage architecture in Newfoundland.]* Drawings by Jean M. Ball. St. John's, Nfld.: Valhalla Press: by arrangement with the Newfoundland Historic Trust, 1978. unpagged (Newfoundland Historic Trust publications; v.2)

Theberge, Clifford B. and Elaine Theberge. *The Trent-Severn Waterway: a traveller's companion*. Toronto: Samuel-Stevens (Canada), 1978. 171 p.

Thomson, Colin A. *Blacks in deep snow: black pioneers in Canada*. Don Mills, Ont.: J.M. Dent (Canada), 1979. 112 p.

Tucker, Albert. *Steam into wilderness: Ontario Northland Railway, 1902-1962*. Don Mills, Ont.: Fitzhenry & Whiteside, 1978. viii, 214 p.

*Vancouver Island: land of contrasts*. Edited by Charles N. Forward. Victoria, BC: Dept. of Geography, University of Victoria, 1979. xxiv, 350 p. (Western geographical series; v. 17)

Vernex, Jean Claude. *Les francophones du Nouveau-Brunswick: géographie d'un groupe ethnoculturel minoritaire*. Lille, France: Atelier reproduction des thèses, Université de Lille III; Paris: Librairie Honoré Champion, 1978. 2v.

Vroom, Richard and Arthur T. Doyle. *Old New Brunswick: a Victorian portrait*. Don Mills, Ont.: Oxford University Press, 1978. unpagged

Western Canadian Studies Conference, 9th, University of Calgary, 1977. *One century later: western Canadian reserve Indians since Treaty 7*. Edited by Ian A.L. Getty and Donald B. Smith. Vancouver: University of British Columbia Press, 1978. xvi, 153 p.

Willmot, Elizabeth A. *Faces and places along the railway*. Agincourt, Ont.: Gage Pub., 1979. 126 p.

Wright, James V. *Ontario prehistory: an eleven-thousand-year archaeological outline*. Ottawa: Archaeological Survey of Canada, National Museum of Man, National Museums of Canada, 1972; Toronto: Van Nostrand Reinhold, 1977. 120 p. (Canadian prehistory series)

— *Quebec prehistory*. Ottawa: Archaeological Survey of Canada, National Museum of Man, National Museums of Canada; Toronto: Van Nostrand Reinhold, 1979. 128 p. (Canadian prehistory series)

## Economics

Alexander, David. *The decay of trade: an economic history of the Newfoundland saltfish trade, 1935-1965*. St. John's, Nfld.: Institute of Social and Economic Research, Memorial University of Newfoundland, 1977. x, 173 p. (Newfoundland social and economic studies; no. 19)

Association des économistes québécois. Congrès, 3<sup>e</sup>, Québec, Qué., 1978. *Qui décide au Québec?: Les centres de décision de l'économie québécoise*. Textes du Congrès de l'Association des économistes québécois, avril 1978. Rassemblés par Jean-Yves Desrosiers et Luc-Normand Tellier. Montréal: Quinze, 1978. 227 p. (Collection Économie et développement)

Association des économistes québécois. Congrès, 4<sup>e</sup>, Montréal, Qué., 1979. *Le Québec et ses partenaires économiques canadiens: perspectives d'avenir*. Textes préparatoires du Congrès de l'Association des économistes québécois, avril 1979. Rassemblés par Michel Boisvert et al. Montréal: Quinze, 1979. 246 p. (Collection Économie et développement)

Atlantic Provinces Economic Council. *The Atlantic vision, 1990: development strategy for the 1980's*. Halifax: Atlantic Provinces Economic Council, 1979. 172 p.

Bercuson, David Jay. *Fools and wise men: [the rise and fall of the One Big Union]*. Scarborough, Ont.: McGraw-Hill Ryerson, 1978. xvii, 300 p.

Cameron, Donald. *The education of Everett Richardson: the Nova Scotia Fishermen's Strike, 1970-71*. Toronto: McClelland and Stewart, 1977. 239 p.

*Canadian confederation at the crossroads: the search for a federal-provincial balance*. Edited by Michael Walker. Vancouver: Fraser Institute, 1978. xx, 361 p.

Collins, David H. *Wings across time: the story of Air Canada*. Toronto: Griffin House, 1978. xviii, 93 p.

*Competition policy in Canada: stage II, Bill C-13*. Edited by J.W. Rowley and W.T. Stanbury. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1978. vii, 311 p.

Cuff, Robert D. and J.L. Granatstein. *American dollars — Canadian prosperity: Canadian-American economic relations, 1945-1950*. Toronto: Samuel-Stevens (Canada), 1978. 286 p.

Draper, Aldred. *Operation fish: the fight to save the gold of Britain, France and Norway from the Nazis . . .* Don Mills, Ont.: General Pub., 1979. 377 p.

Finkel, Alvin. *Business and social reform in the Thirties*. Toronto: J. Lorimer, 1979. 244 p.

Harvey, Fernand. *Révolution industrielle et travailleurs: une enquête sur les rapports entre le capital et le travail au Québec à la fin du 19<sup>e</sup> siècle*. Montréal: Éditions du Boréal express, 1978. 347 p. (Collection Histoire et sociétés)

Hudson, Michael. *Canada in the new monetary order: borrow? devalue? restructure?* Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1978. vii, 117 p.

Larocque, Paul. *Pêche et coopération au Québec*. Montréal: Éditions du Jour, 1978. xlviii, 379 p. (Les Idées du Jour: D-87)

Miquelon, Dale. *Dugard of Rouen: French trade to Canada and the West Indies, 1729-1770*. Montréal: McGill-Queen's University Press, 1978. xi, 282 p.

Niosi, Jorge E. *Le contrôle financier du capitalisme canadien*. Montréal: Presses de l'Université du Québec, 1978. 216 p.

Patterson, Gordon N. *The race for unlimited energy*. Downsview, Ont.: Institute for Aerospace Studies, University of Toronto, 1979. xi, 147 p.

*Perspectives on Canadian airline regulation*. Edited by G.B. Reschenthaler and Bruce Roberts. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1979. xiv, 266 p.

*Perspectives on the Royal Commission on Corporate Concentration*. Edited by Paul K. Gorecki and W.T. Stanbury. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1979. xxxv, 308 p.

Richards, John and Larry Pratt. *Prairie capitalism: power and influence in the New West*. Toronto: McClelland and Stewart, 1979. x, 340 p. (Canada in transition series)

Rouillard, Jacques. *Les syndicats nationaux au Québec de 1900 à 1930*. Québec: Presses de l'Université Laval, 1979. 342 p. (Les Cahiers d'histoire de l'Université Laval; 24)

Sales, Arnaud. *La bourgeoisie industrielle au Québec*. Montréal: Presses de l'Université de Montréal, 1979. 322 p.

Scott, Jack. *Canadian workers, American unions*. Vancouver: New Star Books, 1978. 242 p. (Trade unions and imperialism in America; v. 2)

Sinclair, Sonja. *Cordial but not cosy: a history of the Office of the Auditor General*. Toronto: McClelland and Stewart, 1979. 208 p.

Smith, Philip. *The treasure-seekers: the men who built Home Oil*. Toronto: Macmillan of Canada, 1978. ix, 310 p.

Soroko-Tsiupa, Oleg Stefanovich. *Rabochee dvizhenie v Kanade, 1929-1939*. Moskva: Izd-vo Moskovskogo universiteta, 1977. 266 p. (text in Russian)

*Studies on regulation in Canada.* Edited by W.T. Stanbury. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1978. v, 249 p.

Traves, Tom. *The state and enterprise: Canadian manufacturers and the federal government, 1917-1931.* Toronto: University of Toronto Press, 1979. viii, 175 p. (The State and economic life; 1)

Williams, James R. *The Canadian-United States tariff and Canadian industry: a multisectoral analysis.* Toronto: University of Toronto Press, 1978. xi, 174 p.

Wilson, Charles F. *A century of Canadian grain: government policy to 1951.* Saskatoon, Sask.: Western Producer Prairie Books, 1978. 1138 p.

Young, Brian J. *Promoters and politicians: the north-shore railways in the history of Quebec, 1854-85.* Toronto: University of Toronto Press, 1978. xiii, 193 p.

### Government and politics, law

Bergeron, Gérard. *Incertitudes d'un certain pays: le Québec et le Canada dans le monde, 1958-1978.* Québec: Presses de l'Université Laval, 1979. 270 p.

Buck, Tim. *Yours in the struggle: reminiscences of Tim Buck.* Edited by William Beeching and Phyllis Clarke. Toronto: NC Press, 1977. 414 p.

Campbell, Colin and George J. Szabowski. *The superburcauocrats: structure and behaviour in central agencies.* Toronto: Macmillan of Canada, 1979. x, 286 p.

Canada. Task Force on Canadian Unity. *Coming to terms: the words of the debate.* Ottawa: Task Force on Canadian Unity, 1979. viii, 111 p. (issued also in French)

— *A future together: observations and recommendations.* Ottawa: Task Force on Canadian Unity, 1979. 152 p. (issued also in French)

— *A time to speak: the views of the public.* Ottawa: Task Force on Canadian unity, 1979. ix, 309 p. (issued also in French)

*Le Canada et le Québec sur la scène internationale.* Sous la direction de Paul Painchaud. Québec: Centre québécois de relations internationales, 1977. 643 p.

Canadian Bar Association. Committee on the Constitution. *Towards a new Canada/Vers un Canada nouveau.* Ottawa: Canadian Bar Foundation, 1978. xvi, 159, 175, xvi p. (text in English and French on inverted pages)

Chandler, Marsha A. and William M. Chandler. *Public policy and provincial politics.* Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 325 p. (McGraw-Hill Ryerson series in Canadian politics)

Cohen, Maxwell. *The régime of boundary waters: the Canadian-United States experience.* Leyden, Netherlands: A.W. Sijthoff, 1977. 221-339 p.

Douglas, Thomas C. *Tommy Douglas speaks: till power is brought to pooling.* Edited by L.D. Lovick. Lantzville, BC: Oolichan Books, 1979. 288 p.

*Federalism in Canada and Australia: the early years.* Edited by Bruce W. Hodgins, Don Wright and W.H. Heick. Waterloo, Ont.: Wilfrid Laurier University Press, 1978. xiv, 318 p.

Grenier, Bernard. *La déclaration canadienne des droits, une loi bien ordinaire?* Québec: Presses de l'Université Laval, 1979. xxviii, 172 p. (Bibliothèque juridique: Série D, Textes juridiques commentés; 2)

*The growth of public employment in Canada.* By Richard M. Bird. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1979. xxiv, 190 p. (The IRPP series on public sector employment in Canada; v. 3)

Hogg, Peter W. *Constitutional law of Canada.* Toronto: Carswell, 1977. xlii, 548 p.

Kay, Zachariah. *Canada and Palestine: the politics of noncommitment.* Jerusalem: Israel University Press, 1978. xii, 218 p.

Kos-Rabcewicz-Zubkowski, Ludwik. *Commercial and civil law arbitration in Canada.* Ottawa: University of Ottawa Press, 1978. 140 p.

*The legislative process in Canada: the need for reform.* Proceedings of a conference held at the University of Victoria and sponsored by the Institute for Research on Public Policy and the Faculty of Law, University of Victoria, March 31-April 1, 1978. Edited by William A.W. Neilson and James C. MacPherson. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1978. xii, 328 p.

Lester B. Pearson Conference on the Canada-United States Relationship, 4th, Niagara Institute, 1976. *Canadian cultural nationalism.* Edited by Janice L. Murray. New York: Published for the Canadian Institute of International Affairs and the Council on Foreign Relations by New York University Press, 1977. ix, 139 p.

Lévesque, René. *La passion du Québec.* Montréal: Éditions Québec-Amérique, 1978. 238 p.

O'Neil, Pierre et Jacques Benjamin. *Les mandarins du pouvoir; l'exercice du pouvoir au Québec de Jean Lesage à René Lévesque.* Montréal: Éditions Québec-Amérique, 1978. 285 p.

Persky, Stan. *Son of Socred: has Bill Bennett's government gotten B.C. moving again?* Vancouver: New Star Books, 1979. 319 p.

Picard, Ellen I. *Legal liability of doctors and hospitals in Canada.* Toronto: Carswell, 1978. xxxv, 425 p.

*Public employment and compensation in Canada: myth and realities.* Edited by David K. Foot. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1978. xii, 188 p. (The IRPP series on public sector employment in Canada; v. 1)

*Public employment in Canada; statistical series.* Edited by David K. Foot. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth

(Canada), 1979. vi, 217 p. (The IRPP series on public sector employment in Canada; v. 4)

Ratushny, Ed. *Self-incrimination in the Canadian criminal process*. Toronto: Carswell, 1979. xxiii, 432 p. (Carswell's criminal law series)

Roy, Jean-Louis. *Le choix d'un pays: le débat constitutionnel Québec-Canada, 1960-1976*. Montréal: Leméac, 1978. 366 p.

*Studies in public employment and compensation in Canada*. Edited by Meyer W. Bucovetsky. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1979. xxvii, 177 p. (The IRPP series on public sector employment in Canada; v. 2)

Swainson, Neil A. *Conflict over the Columbia: the Canadian background to an historic treaty*. Toronto: Institute of Public Administration of Canada; Montréal: McGill-Queen's University Press, 1979. xxiv, 476 p. (Canadian public administration series)

*Trudeau and foreign policy*. Toronto: Canadian Institute of International Affairs, 1978. p. 267-456. (International journal, v. 33, no. 2, Spring 1978)

*The Trudeau decade*. Edited by Rick Butler and Jean-Guy Carrier. Toronto: Doubleday Canada, 1979. vi, 398 p.

Williams, J. Steven. *Basic Canadian legal terminology*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. vii, 151 p.

Willis, John. *A history of Dalhousie Law School*. Toronto: University of Toronto Press, 1979. viii, 302 p.

## Sociology

*Canadian social policy*. Edited by Shankar A. Yelaaja. Waterloo, Ont.: Wilfrid Laurier University Press, 1978. xiv, 321 p.

*Childhood and adolescence in Canada*. Edited by Karigoudar Ishwaran. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 386 p. (McGraw-Hill Ryerson interdisciplinary studies in family and marriage)

*Community work in Canada*. Edited by Brian Wharf. Toronto: McClelland and Stewart, 1979. 272 p.

Culyer, A.J. *Measuring health: lessons for Ontario*. Toronto: Published for the Ontario Economic Council by University of Toronto Press, 1978. viii, 189 p. (Ontario Economic Council research studies; 14)

Deschênes, Gaston. *Ensemble!: Revue de la coopération, 1940-1951*. Sherbrooke, Qué.: Chaire de coopération de l'Université de Sherbrooke, 1977. 102 p. (Dossiers sur les coopératives; 4)

Evans, Robert G. and Malcolm F. Williamson. *Extending Canadian health insurance: options for pharmacare and denticare*. Toronto: Published for the Ontario Economic Council by University of Toronto Press, 1978. xii, 276 p. (Ontario Economic Council research studies; 13)

Fremes, Ruth. *The Canadian woman's almanac*. Agincourt, Ont.: Methuen, 1978. 272 p.

French, Richard and André Béliveau. *The RCMP and the management of national security*. Montréal: Institute for Research on Public Policy; Scarborough, Ont.: distributed by Butterworth (Canada), 1979. xiii, 79 p. (issued also in French)

Hackler, James C. *The prevention of youthful crime: the great stumble forward*. Agincourt, Ont.: Methuen, 1978. viii, 252 p.

*Identity: the black experience in Canada*. Edited by Patricia Thorvaldson. Toronto: Ontario Educational Communications Authority; Agincourt, Ont.: Gage Educational Pub., 1979. x, 163 p.

*The individual, language and society in Canada/L'individu, la langue et la société au Canada*. Edited by W.H. Coons, Donald M. Taylor and Marc-Adélaïde Tremblay. Ottawa: Canada Council, 1977. 436 p. (includes abstracts and some text in French)

Krauter, Joseph F. and Morris Davis. *Minority Canadians: ethnic groups*. Agincourt, Ont.: Methuen, 1978. 120 p. (Canadian sociology)

Lagrange, Jean-Paul de. *Les origines de la presse au Québec, 1760-1791*. Montréal: Éditions de Lagrange, 1975. 157 p. (Collection Liberté) (H. Histoire)

—. *Liberté et servitude de l'information au Québec confédéré, 1867-1967*. Ottawa: Éditions de Lagrange, 1978. 371 p. (Collection Liberté) (H. Histoire)

McGraw, Donald. *Le développement des groupes populaires à Montréal, 1963-1973*. Montréal: Éditions coopératives A. St-Martin, 1978. 184 p. (Collection "Pratiques sociales")

Morissonneau, Christian. *La terre promise: le mythe du Nord québécois*. Montréal: Hurtubise HMH, 1978. 212 p. (Cahiers du Québec; 39; Collection Ethnologie)

National Museum of Man. History Division. *The parliament of women: the National Council of Women of Canada, 1893-1929*. By Veronica Jane Strong-Boag. Ottawa: National Museums of Canada, 1976. ix, 492 p. (History Division. Paper; no. 18) (Mercury series)

Ontario. Royal Commission on the Toronto Jail and Custodial Services. *Report of the Royal Commission on the Toronto Jail and Custodial Services*. Toronto: Queen's Printer for Ontario, 1978. 4 v.

Peers, Frank W. *The public eye: television and the politics of Canadian broadcasting, 1952-1968*. Toronto: University of Toronto Press, 1979. xvi, 459 p.

*The peopling of Newfoundland: essays in historical geography*. Edited by John J. Mannion. St. John's, Nfld.: Institute of Social and Economic Research, Memorial University of Newfoundland, 1977. viii, 289 p. (Newfoundland social and economic papers; no. 8)

Québec. Ministre d'état au développement culturel. *La politique québécoise du développement culturel*. Québec: Éditeur officiel du Québec, 1978. 2 v.

Québec. Office de planification et de développement du Québec. *Évolution démographique du Québec*. Par Hervé Gauthier. Québec: Office de planification et développement du Québec, 1977. xxvi, 168 p. (Collection Études et recherches)

Task Force on the Child as Citizen. *Admittance restricted: the child as citizen in Canada/Interdit aux mineurs: la place de l'enfant dans la société canadienne*. Ottawa: Canadian Council on Children and Youth, 1978. 172, 195p. (text in English and French on inverted pages)

Taylor, Malcolm G. *Health insurance and Canadian public policy: the seven decisions that created the Canadian health insurance system*. Toronto: Institute of Public Administration of Canada; Montréal: McGill-Queen's University Press, 1978. xviii, 473 p. (Canadian public administration series)

*Two nations, many cultures: ethnic groups in Canada*. Edited by Jean Leonard Elliott. Scarborough, Ont.: Prentice-Hall of Canada, 1979. xiii, 395 p.

## Education

Drolet, Gaëtan, comp. *Les bibliothèques universitaires du Québec: essai de bibliographie*. Montréal: Conférence des recteurs et des principaux des universités du Québec, 1979. 197 p.

*Education and development in Atlantic Canada*. Proceedings of a conference held at Dalhousie University under the joint auspices of the Dalhousie Department of Education and the Atlantic Education Association, April 28-30, 1976. Edited by Eric W. Ricker. Halifax: Dept. of Education, Dalhousie University, 1978. xxvi, 387 p. (abridged version issued in French)

*Éducation et travail: un projet d'éducation pour le Québec d'aujourd'hui*. Par Gaëtan Daoust et al. Montréal: Hurtubise HMH, 1978. 335p. (Collection Constantes; 36)

*Egerton Ryerson and his times: [essays on the history of education]*. Edited by Neil McDonald and Alf Chaiton. Toronto: Macmillan of Canada, 1978. 319 p.

Gwynne-Timothy, John. *Western's first century*. London, Ont.: University of Western Ontario, 1978. xv, 854 p.

Neatby, Hilda. *Queen's University: to strive, to seek, to find, and not to yield*. v.1-. Edited by Frederick W. Gibson and Roger Graham. Montréal: McGill-Queen's University Press, 1978-.

*Shaping the schools of the Canadian West*. Edited by David C. Jones, Nancy M. Sheehan and Roberta M. Stamp. Calgary, Alta.: Detselig Enterprises, 1979. viii, 256 p.

Wood, Dean D. *Multicultural Canada: a teacher's guide to ethnic studies*. Toronto: Ontario Institute for Studies in Education, 1978. vi, 138 p. (OISE Curriculum series; 36)

## Religion

Grisé, Jacques. *Les conciles provinciaux du Québec et l'Église canadienne, 1851-1886*. Montréal: Fides, 1979. 454 p. (Collection Essais et recherches: Section histoire)

Hewett, Phillip. *Unitarians in Canada*. Don Mills, Ont.: Fitzhenry & Whiteside, 1978. x, 390 p.

Lambert, Thérèse. *Marguerite Bourgeoys, éducatrice, 1620-1700: mère d'un pays et d'une Église*. Montréal: Éditions Bellarmin, 1978. 137 p.

## Environment

Knelman, Fred H. *Anti-nation: transition to sustainability*. Oakville, Ont.: Mosaic Press/Valley Editions, 1978. 155 p.

Ripley, Earle A., Robert E. Redmann and James Maxwell. *Environmental impact of mining in Canada*. Kingston, Ont.: Centre for Resource Studies, Queen's University, 1978. xvii, 274 p. (The national impact of mining series; 7)

Solomon, Lawrence. *The conserver solution: a project of the Pollution Probe Foundation*. Toronto: Doubleday Canada; Garden City, NY: Doubleday, 1978. viii, 220 p.

## Science and technology

Emmerson, Donald W. *Canadian inventors and innovators: pioneering in plastics*. Scarborough, Ont.: Canadian Plastics Pioneers, 1978. ix, 200 p.

*Essais pour une préhistoire de la psychiatrie au Canada, 1800-1885, suivi d'une anthologie de textes*. Par Viateur Dubé et al. Sous la direction d'André Paradis. Trois-Rivières, Qué.: Dép. de philosophie, Université du Québec à Trois-Rivières, 1977. Pagination multiple (Recherches et théories; n° 15)

*Face au nucléaire*. Par Jean-Marc Carpentier et al. Sillery, Qué.: Québec Science, 1979. 314 p. (Les Dossiers de Québec Science)

Karstad, Aleta. *Aleta Karstad's Canadian nature notebook*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 144 p.

Thomson, Malcolm M. *The beginning of the long dash: a history of timekeeping in Canada*. Toronto: University of Toronto Press, 1978. xvii, 190 p.

Wadland, John Henry. *Ernest Thompson Seton: man in nature and the Progressive Era, 1880-1915*. New York: Arno Press, 1978. xii, 528 p. (Biologists and their world)

## SECOND SECTION

### General reference works

*Archives and medicine*. Ottawa: Association of Canadian Archivists, 1980. p.3-223 (Archivaria, no. 10, Summer 1980)

Avis, Walter S. and A.M. Kinloch. *Writings on Canadian English, 1792-1975: an annotated bibliography*. Don Mills, Ont.: Fitzhenry & Whiteside, 1978. 153 p.

Bennett, Joy and James Polson, comps. *Irving Layton: a bibliography, 1935-1977*. Montréal: Concordia University Libraries, 1979. iv, 200 p.

*Bibliographie du Québec, 1821-1967*. v.1-. Notices établies par le Bureau de la bibliographie rétrospective. Québec: Bibliothèque nationale du Québec, 1980-.

Binks, Kenneth. *Canada: Library of Parliament*. Ottawa: KCB Publications, 1979? 64 p. (issued also in French)

Bishop, Olga B., Barbara I. Irwin and Clara G. Miller. *Bibliography of Ontario history, 1867-1976: cultural, economic, political, social*. 2nd ed. Toronto: University of Toronto Press, 1980. 2. v. (Ontario historical studies series)

Cooke, Owen A. *The Canadian military experience, 1867-1967: a bibliography/Bibliographie de la vie militaire au Canada, 1867-1967*. Ottawa: Department of National Defence, 1979. ix, 244 p. (Occasional paper; no. 2) (includes English and French publications)

Crane, David. *A dictionary of Canadian economics*. Edmonton: Hurtig, 1980. ix, 372 p.

*Dictionary of Canadian biography: 1771 to 1800*. v.4. Edited by Frances G. Halpenny. Toronto: University of Toronto Press, 1979. lviii, 913 p. (issued also in French)

*Guide to Canadian manufacturers*. Toronto: Dun & Bradstreet Canada. 1979. 4 v.

*The Hamilton working class, 1820-1977: a bibliography*. Compiled by Wayne Roberts. Hamilton, Ont.: Labour Studies Programme, McMaster University, 1978. 62 p. (Labour Studies Programme. Publication; 78-02)

Lamonde, Yvan. *Les bibliothèques de collectivités à Montréal, 17<sup>e</sup>-19<sup>e</sup> siècle: sources et problèmes*. Montréal: bibliothèque nationale du Québec, 1979. 139 p.

Lecker, Robert and Jack David, eds. *The annotated bibliography of Canada's major authors*. v.1-. Downsview, Ont.: ECW Press, 1979-.

Light, Beth and Veronica Strong-Boag. *True daughters of the North: Canadian women's history: an annotated bibliography*. Toronto: OISE Press, 1980. v, 210 p. (OISE bibliography series; no. 5)

Messier, Jean-Jacques. *Bibliographie relative à la Nouvelle-France*. Montréal: Éditions Univers: L'Aurore, 1979. 198 p. (Collection Exploration: Histoire)

National Library of Canada. *The National Library of Canada: twenty-five years after*. By Ian Wees. Ottawa: National Library of Canada, 1978. viii, 60 p. (issued also in French)

—Rare Books and Manuscripts Division. *Books in native languages in the collection of the Rare Books and Manuscripts Division of the National Library of Canada/Livres en langues autochtones dans la collection de la Division des livres rares et des manuscrits de la Bibliothèque nationale du Canada*. Compiled by Joyce M. Banks. Ottawa: National Library of Canada, 1980. xiii, 93 p. (includes English and French publications)

National Map Collection. *Maps of Indian reserves and settlements in the National Map Collection/Cartes des réserves et agglomérations indiennes de la Collection nationale des cartes et plans*. v.1-. Compiled by Linda Camponi. Ottawa: National Map Collection, 1980-. (text in English and French)

Osler Library. *The Osler Library* [of the History of Medicine] Montréal: McGill University, 1979. 63 p.

Public Archives of Canada. Library. *Catalogue of the Public Archives Library/Catalogue de la Bibliothèque des Archives publiques*. Boston, Mass.: G.K. Hall, 1979. 12 v. (includes English and French publications)

*Répertoire des parlementaires québécois, 1867-1978*. Sous la direction d'André Lavoie. Québec: Service de documentation politique, Bibliothèque de la Législature, 1980. xv, 796 p.

Roland, Charles G. and Paul Potter. *An annotated bibliography of Canadian medical periodicals, 1826-1975*. Toronto: Hannah Institute for the History of Medicine, 1979. xvii, 77 p.

Ryder, Dorothy E. *Checklist of Canadian directories/Répertoire des annuaires canadiens, 1790-1950*. Ottawa: National Library of Canada, 1979. xvii, 287 p. (text in English and French)

Shearing, Clifford D., F. Jennifer Lynch and Catherine J. Matthews. *Policing in Canada: a bibliography/La police au Canada: une bibliographie*. Ottawa: Research Division, Solicitor General Canada, 1979. xiv, 362 p. (includes English and French publications)

Spence, Alex, comp. *Homosexuality in Canada: a bibliography*. Toronto: Pink Triangle Press, 1979. 85 p. (Canadian Gay Archives publication; no. 1)

Stevens, Peter. *Modern English-Canadian poetry: a guide to information sources*. Detroit, Mich.: Gale Research, 1978. xi, 216 p. (American literature, English literature, and world literatures in English; v. 15) (Gale information guide library)

Stuart, Ross and Thomas B. Vincent, comps. *A chronological index of locally written verse published in the newspapers and magazines of Upper and Lower Canada, Maritime Canada, Newfoundland through 1815*. Kingston, Ont.: Loyal Colonies Press, 1979. vii, 386 p. (text in English and French)

Tratt, Gertrude E.N. *A survey and listing of Nova Scotia newspapers, 1752-1957: with particular reference to the period before 1867*. Halifax: Dalhousie University, University Libraries, School of Library Service, 1979. 193 p. (Dalhousie University Libraries and Dalhousie University School of Library Service. Occasional paper; 21)

*Who's who in Canadian finance*. v.-. Edited by Evelyn J.C. Davidson. Willowdale, Ont.: Trans-Canada Press, 1979-.

## Biography

Adams, John Coldwell. *Seated with the mighty: a biography of Sir Gilbert Parker*. Ottawa: Borealis Press, 1979. 247 p.

Bothwell, Robert and William Kilbourn. *C.D. Howe, a biography*. Toronto: McClelland and Stewart, 1979. 397 p.

Clippingdale, Richard. *Laurier, his life and world*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 224 p. (Prime Ministers of Canada)

Cole, Jean Murray. *Exile in the wilderness: the biography of chief factor Archibald McDonald*. Don Mills, Ont.: Burns/MacEachern, 1979. xviii, 268 p.

Doyle, James. *Annie Howells and Achille Fréchette*. Toronto: University of Toronto Press, 1979. xii, 131 p.

Durham, Louisa Elizabeth Grey Lambton, Countess of. *Letters & diaries of Lady Durham*. Edited by Patricia Godsell. Ottawa: Oberon Press, 1979. 203 p.

Eggleston, Wilfrid. *Literary friends*. Ottawa: Borealis Press, 1980. vi, 134 p.

Farquhar, James A. *Farquhar's luck*. Halifax: Petheric Press, 1980. 188 p.

Fortin, Lionel. *Félix-Gabriel Marchand*. Saint-Jean-sur-Richelieu, Qué.: Éditions Mille Roches, 1979. 232 p.

Harper, John Russell. *Krieghoff*. Toronto: University of Toronto Press, 1979. xvi, 204 p.

Innis, Harold A. *The idea file of Harold Adams Innis*. Toronto: University of Toronto Press, 1980. xxi, 287 p.

Kendle, John Edward. *John Bracken: a political biography*. Toronto: University of Toronto Press, 1979. xiii, 318 p.

Kurelek, William. *Someone with me: the autobiography of William Kurelek*. Toronto: McClelland and Stewart, 1980. 176 p.

Laing, G. Blair. *Memoirs of an art dealer*. Toronto: McClelland and Stewart, 1979. 264 p.

Macdonald, R.H. *Grant MacEwan: no ordinary man*. Saskatoon, Sask.: Western Producer Prairie Books, 1979. 273 p.

MacEwan, John W. Grant. *Pat Burns, cattle king*. Saskatoon, Sask.: Western Producer Prairie Books, 1979. 200 p.

Mardiros, Anthony. *William Irvine: the life of a prairie radical*. Toronto: J. Lorimer, 1979. 298 p.

Miller, Carman. *The Canadian career of the Fourth Earl of Minto: the education of a viceroy*. Waterloo, Ont.: Wilfrid Laurier University Press, 1980. viii, 225 p.

*The pre-Confederation premiers: Ontario government leaders, 1841-1867*. Edited by J.M.S. Careless. Toronto: University of Toronto Press, 1980. xii, 340 p. (Ontario historical studies series; 2)

Pullen, William J.S. *The Pullen expedition in search of Sir John Franklin: the original diaries, logs, and letters of Commander W.J.S. Pullen*. Edited by Hugh F. Pullen. Toronto: Arctic History Press, 1979. 230 p.

Reynolds, Louise. *Agnes: the biography of Lady Macdonald*. Toronto: Samuel-Stevens, 1979. 229 p.

Reynolds, Paul R. *Guy Carleton: a biography*. Agincourt, Ont.: Gage Pub., 1980. xiii, 209 p.

Savage, Candace. *Our Nell: a scrapbook biography of Nellie L. McClung*. Saskatoon, Sask.: Western Producer Prairie Books, 1979. 253 p.

Schull, Joseph. *The great Scot: a biography of Donald Gordon*. Montréal: McGill-Queen's University Press, 1979. x, 291 p.

Stewart, Hilary. *Robert Davidson: Haida printmaker*. Vancouver: Douglas&McIntyre, 1979. 117 p.

Stewart, Robert. *Sam Steele: lion of the frontier*. Toronto: Doubleday Canada, 1979. viii, 303 p.

Storrs, Monica. *God's galloping girl: the Peace River diaries of Monica Storrs, 1929-1931*. Edited by W.L. Morton and Vera K. Fast. Vancouver: University of British Columbia Press, 1979. xlix, 307 p. (Recollections of the pioneers of British Columbia; v.3)

Tausky, Thomas E. *Sara Jeannette Duncan: novelist of empire*. Port Credit, Ont.: P.D. Meany, 1980. 300 p.

Tippett, Maria. *Emily Carr, a biography*. Don Mills, Ont.: Oxford University Press, 1979. xiii, 314 p.

### Fine arts and performing arts

Agnes Etherington Art Centre. *William Brymner, 1855-1925: a retrospective/William Brymner, 1855-1925: aperçu rétrospectif de l'artiste*. By Janet Braide. Kingston, Ont.: Agnes Etherington Art Centre, Queen's University, 1979. 104 p. (text in English and French in parallel columns)

Ayotte, Léo. *Ayotte*. Texte d'André Fortier. La Prairie, Qué.: M. Broquet, 1980. 104 p. (Collection Signatures)

Doolittle, Joyce and Zina Barnieh. *A mirror of our dreams: children and the theatre in Canada*. With a chapter on theatre in Québec by Hélène Beauchamp. Vancouver: Talonbooks, 1979. 214 p.

Duquette, Jean-Pierre. *Fernand Leduc*. LaSalle, Qué.: Hurtubise HMH, 1980. 154 p. (Cahiers du Québec; 57: Collection Arts d'aujourd'hui)

FitzGerald, Lionel LeMoine. *Lionel LeMoine FitzGerald, 1890-1956: the development of an artist*. By Ann Davis and Pat Bovey. Winnipeg: Winnipeg Art Gallery, 1978. 128 p.

The Gallery/Stratford. *20th century Canadian drawings: exhibition June 4 to September 3, 1979*. Stratford, Ont.: The Gallery/Stratford, 1979. 106 p.

Lacroix, Laurier. *Ozias Leduc the draughtsman: a circulating exhibition organized by Laurier Lacroix for the Sir George Williams Art Galleries, Concordia University/ Dessins inédits d'Ozias Leduc: une exposition itinérante organisée par Laurier Lacroix pour les Galeries d'art Sir George Williams de l'Université Concordia*. Montréal: Sir George Williams Art Galleries, Concordia University, 1978. 168 p. (text in English and French in parallel columns)

Laflamme, Jean et Rémi Tourangeau. *L'Église et le théâtre au Québec*. Montréal: Fides, 1979. 355 p.

Lapierre, Viateur. *Lapierre*. Texte de Pierre Paquin. La Prairie, Qué.: M. Broquet, 1979. 103 p. (Collection Signatures)

McCord Museum. *Fact and fiction: Canadian painting and photography, 1860-1900/Le réel et l'imaginaire: peinture et photographie canadiennes, 1860-1900*. By Ann Thomas. Montréal: McCord Museum, 1979. 116 p. (text in English and French in parallel columns)

McKay, Kenneth B. *Puppetry in Canada: an art to enchant*. Willowdale, Ont.: Ontario Puppetry Association Pub., 1980. 168 p.

McKendry, Ruth and Blake McKendry. *Quilts and other bedcoverings in the Canadian tradition*. Scarborough, Ont.: Van Nostrand Reinhold, 1979. 240 p.

Mercier, Monique. *Mercier*. Text by Pierre H. Savignac. La Prairie, Qué.: M. Broquet, 1980. 104 p. (Collection Signatures)

Morrisseau, Norval. *The art of Norval Morrisseau*. By Lister Sinclair and Jack Pollock. Agincourt, Ont.: Methuen, 1979. 200 p.

Newlands, David L. *Early Ontario potters: their craft and trade*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 245 p.

Noël, Michel. *Art décoratif et vestimentaire des Amérindiens du Québec, 16<sup>e</sup> et 17<sup>e</sup> siècles*. Montréal: Leméac, 1979. ix, 194 p.

Noppen, Luc, Claude Paulette et Michel Tremblay. *Québec, trois siècles d'architecture*. Montréal: Libre expression, 1979. xi, 440 p.

Robert, Guy. *Rousseau et le moulin des arts*. La Prairie, Qué.: M. Broquet, 1979. 149 p.

Saint-Pierre, Annette. *Le rideau se lève au Manitoba*. Saint-Boniface, Man.: Éditions des Plaines, 1980. 318 p.

*'Twas ever thus: a selection of eastern Canadian folk art*. Toronto: M.F. Feheley, 1979. 87 p.

Véronneau, Pierre. *Histoire du cinéma au Québec*. v.1- . Montréal: Cinémathèque québécoise, Musée du Cinéma, 1979- . (Les Dossiers de la Cinémathèque; 3)

Webster, Donald Blake. *English-Canadian furniture of the Georgian period*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 232 p.

### Linguistics and literature

Aichinger, Peter. *Earle Birney*. Boston, Mass.: Twayne Pubs., 1979. 180 p. (Twayne's world author series; TWAS 538: Canada)

*The Alberta diamond jubilee anthology*. Edited by John W. Chalmers. Edmonton: Hurtig, 1979. 335 p.

Bessette, Gérard. *Mes romans et moi*. LaSalle, Qué.: Hurtubise HMH, 1979. 128 p. (Cahiers du Québec; 43: Collection Littérature)

Campbell, Wilfred, Archibald Lampman and Duncan Campbell Scott. *At the Mermaid Inn: Wilfred Campbell, Archibald Lampman, Duncan Campbell Scott in "The Globe", 1892-93*. Toronto: University of Toronto Press, 1979. xxiii, 353 p. (Literature of Canada; 21)

Condemine, Odette. *Octave Crémazie*. Montréal: Fides, 1980. 273 p. (Albums)

Crawford Symposium, University of Ottawa, 1977. *The Crawford Symposium*. Edited by Frank M. Tierney. Ottawa: University of Ottawa Press, 1979. ix, 158 p. (Reappraisals, Canadian writers)

Davies, Robertson. *The enthusiasms of Robertson Davies*. Edited by Judith Skelton Grant. Toronto: McClelland and Stewart, 1979. 320 p.

*Les Fridolinades*. v.1- . Par Gratien Gélinas. Montréal: Quinze, 1980- .

*The Languages of Canada*. Edited by J.K. Chambers. Montréal: Didier, 1979. 259 p. (Série 3L/3L series; 3)

L'Hérault, Pierre. *Jacques Ferron, cartographe de l'imaginaire*. Montréal: Presses de l'Université de Montréal, 1980. 293 p. (Collection Lignes québécoises)

*The Long poem anthology*. Edited by Michael Ondaatje. Toronto: Coach House Press, 1979. 343 p.

McConnell, Ruth E. *Our own voice: Canadian English and how it is studied*. Agincourt, Ont.: Gage Educational Pub., 1979. x, 276, H48 p.

McMullen, Lorraine. *Sinclair Ross*. Boston, Mass.: Twayne Pubs., 1979. 159 p. (Twayne's world authors series; TWAS 504: Canada)

Major, Robert. *Parti pris: idéologies et littérature*. LaSalle, Qué.: Hurtubise HMH, 1979. 341 p. (Cahiers du Québec; 45: Collection Littérature)

Moisan, Clément. *Poésie des frontières: étude comparée des poésies canadienne et québécoise*. LaSalle, Qué.: Hurtubise HMH, 1979. 346 p. (Collection Constantes; 38)

*Le Mythe de Maria Chapdelaine*. Par Nicole Deschamps, Raymonde Héroux et Normand Villeneuve. Montréal: Presses de l'Université de Montréal, 1980. 263 p.

O'Flaherty, Patrick. *The rock observed: studies in the literature of Newfoundland*. Toronto: University of Toronto Press, 1979. x, 222 p.

*Les Romanciers québécois et leurs œuvres*. Guelph, Ont.; Montréal: Journal of Canadian Fiction, 1979. 310 p. (Journal of Canadian fiction, 25/26)

Simard, Jean-Paul. *Rituel et langage chez Yves Thériault*. Montréal: Fides, 1979. 148 p.

Thériault, Serge A. *La quête d'équilibre dans l'oeuvre romanesque d'Anne Hébert*. Hull, Qué.: Éditions Asticou, 1980. 223 p. (Centre d'études universitaires dans l'Ouest québécois; 1)

### Country and people

Brodeur, René et Robert Choquette. *Villages et visages de l'Ontario français*. Toronto: Office de la télécommunication éducative de l'Ontario; Montréal: Fides, 1979. vii, 142 p.

Bruemmer, Fred. *Children of the North*. Montréal: Optimum Pub., 1979. 159 p.

Cormier, Roméo. *Images de l'Acadie*. LaSalle, Qué.: Hurtubise HMH, 1980. non paginé

Desbarats, Peter and Terry Mosher. *The hecklers: a history of Canadian political cartooning and a cartoonist's history of Canada*. Toronto: McClelland and Stewart; Ottawa: National Film Board of Canada, 1979. 255 p.

De Visser, John. *Newfoundland and Labrador*. Don Mills, Ont.: Oxford University Press, 1979. unpagé

Drummond, Michael. *Montréal and its countryside*. Don Mills, Ont.: Oxford University Press, 1979. unpagé

Evans, Millie and Eric Mullen. *Our Maritimes: exploring Nova Scotia, New Brunswick and Prince Edward Island*. Tantallon, NS: Four East Publications, 1979. 251 p.

*Folktales of French Canada*. Prepared and translated by Edith Fowke. Toronto: NC Press, 1979. 144 p.

Fortier, John and Owen Fitzgerald. *Fortress of Louisbourg*. Don Mills, Ont.: Oxford University Press, 1979. 80 p.

Haas, Rudi. *Ottawa, our nation's capital*. Don Mills, Ont.: Oxford University Press, 1980. unpagé

Hines, Sherman. *Atlantic Canada*. Toronto: Clarke, Irwin, 1979. unpagé

McKillop, A.B. *A disciplined intelligence: critical inquiry and Canadian thought in the Victorian era*. Montréal: McGill-Queen's University Press, 1979. xii, 287 p.

Mercer, Paul, comp. *Newfoundland songs and ballads in print, 1842-1974: a title and first-line index*. St. John's, Nfld.: Memorial University of Newfoundland, 1979. xv, 343 p. (Memorial University of Newfoundland folklore and language publications; 8) (Bibliographical and special series; no. 6)

Payzant, Joan M. and Lewis J. Payzant. *Like a weaver's shuttle: a history of the Halifax-Darimouth ferries*. Halifax: Nimbus Pub., 1979. 214 p.

Russell, Andy and Janis Kraulis. *Alpine Canada*. Edmonton: Hurtig, 1979. 143 p.

Russell, Edward C. *Customs and traditions of the Canadian Armed Forces*. Ottawa: Deneau & Greenberg: Dept. of National Defence: Canadian Government Publishing Centre, 1980. xvi, 265 p. (issued also in French)

Savard, Rémi. *Destins d'Amérique: les autochtones et nous*. Montréal: L'Hexagone, 1979. 189 p.

Sawchuk, Joe. *The Metis of Manitoba: reformulation of an ethnic identity*. Toronto: PMA Books, 1978. xi, 96 p. (Canadian experience series; 6)

Simoneau, Diane. *Les médecines populaires au Québec*. Montréal: Éditions Univers: L'Aurore, 1980. 142 p. (Médecines)

*Treasures of Canada*. By Alan E. Samuel et al. Samuel-Stevens, 1980. 415 p.

Trueman, Stuart. *Tall tales and true tales from down east: eerie experiences, heroic exploits, extraordinary personalities, ancient legends and folklore from New Brunswick*

*and elsewhere in the Maritimes*. Toronto: McClelland and Stewart, 1979. 171 p.

Tyrchniewicz, Peggy and Bill Hicks. *Ethnic folk costumes in Canada*. Winnipeg: Hyperion Press, 1979. x, 229 p.

Von Baich, Paul. *British Columbia*. Don Mills, Ont.: Oxford University Press, 1979. unpagé

*The Yellowhead route*. Photographs by John de Visser, Bill Simpkins and Robert Taylor. Don Mills, Ont.: Oxford University Press, 1980. unpagé

### General history

Abu-Laban, Baha. *An olive branch on the family tree: the Arabs in Canada*. McClelland and Stewart; Ottawa: Multiculturalism Directorate, 1980. viii, 259 p. (A history of Canada's peoples)

Bindon, Kathryn M. *More than patriotism: Canada at war, 1914-1918*. Toronto: Personal Library, 1979. 192 p. (Canada's heritage in pictures; v.3)

Chimbos, Peter D. *The Canadian odyssey: the Greek experience in Canada*. Toronto: McClelland and Stewart; Ottawa: Multiculturalism Directorate, 1980. viii, 176 p. (A history of Canada's peoples)

Hatch, Robert McConnell. *Thrust for Canada: the American attempt on Quebec in 1775-1776*. Boston, Mass.: Houghton Mifflin, 1979. xiv, 295 p.

Loken, Gulbrand. *From fjord to frontier: a history of the Norwegians in Canada*. Toronto: McClelland and Stewart; Ottawa: Multiculturalism Directorate, 1980. xiii, 264 p. (A history of Canada's peoples)

McConnell, Barbara and Michael Odesse. *Sainte-Marie among the Hurons*. Don Mills, Ont.: Oxford University Press, 1980. unpagé

Trudel, Marcel. *Histoire de la Nouvelle-France: la seigneurie des Cent-Associés, 1627-1663*. v.3, t. 1. Montréal: Fides, 1979. lxxii, 489 p.

### Regional history

Artibise, Alan F.J., ed. *Gateway city: documents on the City of Winnipeg, 1873-1913*. Winnipeg: Manitoba Record Society: University of Manitoba Press, 1979. xiv, 288 p. (The Manitoba Record Society Publications; v. 5)

Brown, Jennifer S.H. *Strangers in blood: fur trade company families in Indian country*. Vancouver: University of British Columbia Press, 1980. xxiii, 255 p.

Cashman, Tony. *A picture history of Alberta*. Edmonton: Hurtig, 1979. 212 p.

Cavell, Edward. *Journeys to the far west*. Toronto: J. Lorimer, 1979. xii, 164 p.

Charbonneau, Pierre. *Le projet québécois d'Honoré Mercier*. Saint-Jean-sur-Richelieu, Qué.: Éditions Mille Roches, 1980. 254 p.

Clift, Dominique and Sheila McLeod Arnopoulos. *The English fact in Quebec*. Montréal: McGill-Queen's

University Press, 1980. xvi, 239 p. (issued also in French)

Cruikshank, Julie. *Athapaskan women: lives and legends*. Ottawa: National Museums of Canada, 1979. viii, 202 p. (Canadian Ethnology service. Paper; no. 57) (Mercury series)

Donaldson, Gordon. *Niagara!: The eternal circus*. Toronto: Doubleday Canada, 1979. x, 271 p.

*The Formation of Alberta: a documentary history*. Edited by Douglas Owram. Calgary, Alta.: Alberta Records Publication Board: Historical Society of Alberta, 1979. lv, 403 p. (Historical Society of Alberta; v. 3)

Gray, James H. *Boomtime: peopling the Canadian prairies*. Saskatoon, Sask.: Western Producer Prairie Books, 1979. 148 p.

Gutkin, Harry. *Journey into our heritage: the story of the Jewish people in the Canadian west*. Toronto: Lester & Orpen Dennys, 1980. 264 p.

Ladell, John and Monica Ladell. *Inheritance: Ontario's century farms past & present*. Toronto: Macmillan of Canada, 1979. xx, 274 p.

Lahaise, Robert. *Les édifices conventuels du Vieux Montréal: aspects ethno-historiques*. LaSalle, Qué.: Hurtubise HMH, 1980. 597 p. (Cahiers du Québec; 50: Collection Ethnologie)

Linteau, Paul-André, René Durocher et Jean-Claude Robert. *Histoire du Québec contemporain. v.1- .* Montréal: Éditions du Boréal express, 1979-.

McBurney, Margaret and Mary Byers. *Homesteads: early buildings and families from Kingston to Toronto*. Toronto: University of Toronto Press, 1979. 282 p.

*Newfoundland from fishery to colony. Northwest passage searches*. Edited by David B. Quinn, Alison M. Quinn and Susan Hillier. New York: Arno Press: H. Bye, 1979. xxvi, 454 p. (New American world: a documentary history of North America to 1612; v. 4)

*Newfoundland in the nineteenth and twentieth centuries: essays in interpretation*. Edited by James Hiller and Peter Neary. Toronto: University of Toronto Press, 1980. viii, 289 p. (Canadian university paperbooks; 251)

Owram, Douglas. *Promise of Eden: the Canadian expansionist movement and the idea of the west, 1856-1900*. Toronto: University of Toronto Press, 1980. x, 264 p.

Pelletier-Baillargeon, Hélène. *Le pays légitime*. Montréal: Leméac, 1979. 253 p. (Collection "A hauteur d'homme")

Picard, François. *Les traces du passé*. Sillery, Qué.: Québec Science, 1979. (Les Dossiers de Québec science)

Pryke, Kenneth G. *Nova Scotia and Confederation, 1864-74*. Toronto: University of Toronto Press, 1979. xi, 240 p. (Canadian studies in history and government; 15)

Rastoul, Pierre et Gilles Rousseau. *Les Îles-de-la-Madeleine: itinéraire culturel*. Montréal: Éditions France-Amérique; Québec: La Documentation québécoise, Ministère des com-

munications, 1979. 240 p. (Guides pratiques: Itinéraires culturels)

*The Riel rebellions: a cartographic history/Le récit cartographique des affaires Riel*. Compiled by William A. Oppen. Toronto: University of Toronto Press; Ottawa: Public Archives of Canada: Canadian Government Publishing Centre, 1979. x, 109 p. (text in English and French)

Rumilly, Robert. *La Compagnie du Nord-Ouest: une épopée montréalaise*. Montréal: Fides, 1980. 2 v.

Sweeney, Robert. *A guide to the history and records of selected Montréal businesses before 1947/Guide pour l'étude d'entreprises montréalaises et leurs archives avant 1947*. Under the direction of Richard Rice and Brian Young. Montréal: Centre de recherche en histoire économique du Canada français, 1979? x, 312 p. (text in English and French)

Upton, Leslie F.S. *Micmacs and colonists: Indian-White relations in the Maritimes, 1713-1867*. Vancouver: University of British Columbia Press, 1979. xvi, 243 p.

Wallace, Hugh N. *The navy, the company, and Richard King: British exploration in the Canadian Arctic, 1829-1860*. Montréal: McGill-Queen's University Press, 1980. xxix, 232 p.

## Economics

Allaire, Yvan and Roger E. Miller. *Canadian business response to the legislation on francization in the workplace*. Montréal: C.D. Howe Research Institute, 1980. vi, 77 p. (Accent Québec; 12) (issued also in French)

Babe, Robert E. *Canadian television broadcasting structure, performance and regulation*. Ottawa: Economic Council of Canada, 1979. ix, 250 p. (issued also in French)

Benson, John N. *Provincial government banks: a case study of regional response to national institutions*. Vancouver: Fraser Institute, 1978. xviii, 112 p.

Cousineau, Eric and Peter R. Richardson. *Gold: the world industry and Canadian corporate strategy*. Kingston, Ont.: Centre for Resource Studies, Queen's University, 1979. xvi, 192 p.

Fetherling, Doug. *Gold diggers of 1929: Canada and the great stock market crash*. Toronto: Macmillan of Canada, 1979. ix, 180 p.

Foote, Raymond L. *The case of Port Hawkesbury: rapid industrialization and social unrest in a Nova Scotia community*. Toronto: PMA Books, 1979. ix, 173 p. (Canadian experience series)

*Histoire du mouvement ouvrier au Québec, 1825-1976: 150 ans de luttés*. Sous la direction de Louis Fournier. Montréal: CSN; Québec: CEQ, Services des communications, 1979. 235 p.

Kealey, Gregory S. *Toronto workers respond to industrial capitalism, 1867-1892*. Toronto: University of Toronto Press, 1980. xviii, 433 p.

Larivière, Claude. *Albert Saint-Martin, militant d'avant-garde, 1865-1947*. Laval, Qué.: Éditions coopératives A. Saint-Martin, 1979. 290 p. (Collection Luttes ouvrières)

Lasserre, Jean-Claude. *Le Saint-Laurent, grande porte de l'Amérique*. LaSalle, Qué.: Hurtubise HMH, 1980. 753 p. (Cahiers du Québec; 50: Collection Géographie)

McCalla, Douglas. *The Upper Canada trade, 1834-1872: a study of the Buchanan's business*. Toronto: University of Toronto Press, 1979. viii, 231 p.

McCallum, John. *Unequal beginnings: agriculture and economic development in Quebec and Ontario until 1870*. Toronto: University of Toronto Press, 1980. 148 p. (The State and economic life; 2)

McLeod, Kenneth O. *The first century: the story of a Canadian Company: Henry Birks & Sons, 1879-1979*. s.n.: H. Birks, 1979. 128 p.

MacPherson, Ian. *Each for all: a history of the co-operative movement in English Canada, 1900-1945*. Toronto: Macmillan of Canada; Ottawa: Institute of Canadian Studies, Carleton University, 1979. xii, 258 p. (The Carleton library; no. 116)

Marr, William L. and Donald G. Paterson. *Canada: an economic history*. Toronto: Macmillan of Canada, 1980. xx, 539 p.

Maxwell, Judith and Caroline Pestieau. *Economic realities of contemporary Confederation*. Montréal: C.D. Howe Research Institute, 1980. vi, 132 p. (Accent Québec; 14) (issued also in French)

Mills, John M. *Canadian coastlines and inland steam vessels, 1809-1930*. Providence, RI: Steamship Historical Society of America, 1979. xii, 135 p.

Morton, Desmond and Terry Copp. *Working people*. Ottawa: Deneau & Greenberg, 1980. xviii, 349 p.

North American Fur Trade Conference, 3rd, Winnipeg, Man., 1978. *Old trails and new directions: papers of the third North American Fur Trade Conference*. Edited by Carol M. Judd and Arthur J. Ray. Toronto: University of Toronto Press, 1980. viii, 337 p.

Ogle, E.B. *Long distance please: the story of the TransCanada Telephone System*. Don Mills, Ont.: Collins, 1979. 300 p.

Palmer, Bryan D. *A culture in conflict: skilled workers and industrial capitalism in Hamilton, Ontario, 1860-1914*. Montréal: McGill-Queen's University Press, 1979. xviii, 331 p.

Proulx, Pierre, Louise Dulude et Yves Rabeau. *Études des relations commerciales, Québec-USA, Québec-Canada: options et impacts, contraintes et potentiels*. Québec: Ministère des Affaires intergouvernementales, 1979. 585 p.

Raudzens, George. *The British ordnance department and Canada's canals, 1815-1855*. Waterloo, Ont.: Wilfrid Laurier University Press, 1979. xi, 204 p.

Simard, Jean-Jacques. *La longue marche des technocrates*. Laval, Qué.: Éditions coopératives A. Saint-Martin, 1979. 198 p. (Recherches et documents)

*Structured inequality in Canada*. Edited by John Harp and John R. Hopley. Scarborough, Ont.: Prentice-Hall of Canada, 1980. x, 495 p.

Troughton, Michael J. *An atlas of Canadian agriculture: portfolio of maps based on the 1971 census of agriculture*. London, Ont.: Department of Geography, University of Western Ontario, 1979. iii, 104 p.

Valaskakis, Kimon. "L'option Europe": *analyse de la plausibilité d'une association Québec/Canada/Europe*. Québec: Ministère des Affaires intergouvernementales, 1978. xxi, 176 p.

### Government and politics, law

*The Atlantic Provinces and the problems of Confederation*. Edited by George A. Rawlyk. St. John's, Nfld.: Breakwater, 1979. viii, 382 p.

Bastien, Richard. *La solution canadienne*. Montréal: La Presse, 1979. 163 p. (Collection Temps présent)

Baum, Daniel Jay. *Discount justice: the Canadian criminal justice system*. Don Mills, Ont.: Burns & MacEachern, 1979. 148 p.

Beaudoin, Gérard A. *Essais sur la Constitution*. Ottawa: Éditions de l'Université d'Ottawa, 1979. xii, 421 p. (Travaux de la faculté de droit de l'Université d'Ottawa) (Monographies juridiques; n° 13)

Camp, Dalton. *Points of departure*. Ottawa: Deneau & Greenberg, 1979. 259 p.

*Canada challenged: the viability of Confederation*. Edited by Roddick B. Byers and Robert W. Reford. Toronto: Canadian Institute of International Affairs, 1979. viii, 358 p. (Contemporary affairs: 48E) (issued also in French)

*Canada-Israel friendship: the first thirty years/L'Amitié Canada-Israël: les trente premières années*. Edited by Shira Herzog and David Kaufman. Toronto: Canada-Israel Committee, 1979. 144 p. (text in English and French in parallel columns)

*Canadian competition policy: essays in law and economics*. Edited by J. Robert S. Prichard, W.T. Stanbury and Thomas A. Wilson. Scarborough, Ont.: Butterworth (Canada), 1979. xxvii, 652 p.

*Canadian Confederation: a decision-making analysis*. By Walter L. White et al. Toronto: Macmillan of Canada; Ottawa: Institute of Canadian Studies, Carleton University, 1979. xi, 164 p. (The Carleton library; no. 117)

*The Canadian House of Commons observed: parliamentary internship papers/Regards sur la Chambre des communes: mémoires des stagiaires parlementaires*. Edited by Jean-Pierre Gaboury and James Ross Hurley. Ottawa: University of Ottawa Press, 1979. xvii, 374 p. (Research monographs in social sciences; no. 4) (text in English and in French)

Deschênes, Jules. *The sword and the scales*. Scarborough, Ont.: Butterworth (Canada), 1979. xii, 216 p. (issued also in French)

*Hommage à Jean-Charles Bonenfant.* Québec: Presses de l'Université Laval, 1979. 431 p. (Les Cahiers de droit, v. 20, n° 1-2, mars 1979)

Irvine, William P. *Does Canada need a new electoral system?* Kingston, Ont.: Institute of Intergovernmental Relations, Queen's University, 1979. xii, 99 p. (Queen's studies on the future of Canadian communities; 1)

Jones, Richard. *Vers une hégémonie libérale: aperçu de la politique canadienne de Laurier à King.* Québec: Presses de l'Université Laval, 1980. v, 256 p. (Cahiers d'histoire politique; 1)

Kronby, Malcolm C. *Canadian family law.* Don Mills, Ont.: General Pub., 1979. 203 p.

*Law and society in Canada in historical perspective.* Edited by David J. Bercuson and Louis A. Knafla. Calgary, Alta.: University of Calgary, 1979. 172 p. (Studies in history; no. 2)

Lemieux, Vincent. *La fête continue: la vie politique au Québec depuis la Révolution tranquille jusqu'au référendum.* Montréal: Éditions du Boréal express, 1979. 201 p.

McWhinney, Edward. *Quebec and the constitution, 1960-1978.* Toronto: University of Toronto Press, 1979. xvi, 170 p.

Monière, Denis. *Les enjeux du référendum.* Montréal: Éditions Québec/Amérique, 1979. 207 p.

Owram, Douglas. *Building for Canadians: a history of the department of public works, 1840-1960.* Ottawa: Public Relations and Information Services, Public Works Canada, 1979. ix, 381 p. (issued also in French)

Paquette, Richard. *La responsabilité en droit aérien canadien.* Montréal: Wilson & Lafleur, 1979. xiv, 246 p.

Pottle, Herbert L. *Newfoundland, dawn without light: politics, power & the people in the Smallwood era.* St. John's, Nfld.: Breakwater, 1979. vii, 222 p.

*The practice of freedom: Canadian essays on human rights and fundamental freedoms.* Edited by Ronald St. J. Macdonald and John P. Humphrey. Scarborough, Ont.: Butterworth (Canada), 1979. xx, 460 p.

*Le Québec en textes, 1940-1980.* Sous la direction de Gérard Boismenu, Laurent Mailhot et Jacques Rouillard. Montréal: Éditions du Boréal express, 1980. 574 p.

Stursberg, Peter. *Lester Pearson and the American dilemma.* Toronto: Doubleday Canada, 1980. xii, 333 p.

*Le Système politique québécois.* Sous la direction d'Édouard Cloutier et de Daniel Latouche. LaSalle, Qué.: Hurtubise HMH, 1979. 555 p. (Collection L'homme dans la société)

Tucker, Michael. *Canadian foreign policy: contemporary issues and themes.* Scarborough, Ont.: McGraw-Hill Ryerson, 1980. xii, 244 p. (McGraw-Hill Ryerson series in Canadian politics)

Von Riekhoff, Harald, John H. Sigler and Brian W. Tomlin. *Canadian-US relations: policy environments, issues, and*

*prospects.* Montréal: C.D. Howe Research Institute; Washington, DC: National Planning Association, 1979. vi, 149 p. (Canada-US prospects series; 4)

Ward, John. *The Hansard chronicles: a celebration of the first hundred years of Hansard in Canada's Parliament.* Ottawa: Deneau & Greenberg, 1980. xvi, 243 p.

Wilson, Jeffery. *Up against it: children and the law in Canada.* Toronto: Anansi Press, 1980. 166 p.

## Sociology

Alphalhao, J.A. et Victor Manuel Pereira da Rosa. *Les Portugais du Québec: éléments d'analyse socio-culturelle.* Ottawa: Éditions de l'Université d'Ottawa, 1979. 317 p. (Travaux de recherches en sciences sociales; n° 5)

*Edmonton: the emerging metropolitan pattern.* Edited by Peter J. Smith. Victoria, BC: Dept. of Geography, University of Victoria, 1978. xxvii, 291 p. (Western geographical series; v. 15)

*La Femme et la religion au Canada français: un fait socio-culturel, perspectives et prospectives . . .* Sous la direction de Élisabeth J. Lacelle. Montréal: Éditions Bellarmin, 1979. 232 p. (Collection Femmes et religion; 1)

Fournier, Marcel. *Communisme et anticomunisme au Québec, 1920-1950.* Laval, Qué.: Éditions coopératives A. Saint-Martin, 1979. 165 p. (Collection Luttes ouvrières)

Guest, Dennis. *The emergence of social security in Canada.* Vancouver: University of British Columbia Press, 1980. xi, 257 p.

Horn, Michiel. *The League for Social Reconstruction: intellectual origins of the democratic left in Canada, 1930-1942.* Toronto: University of Toronto Press, 1980. xii, 270 p.

Kolasky, John. *The shattered illusion: the history of Ukrainian pro-Communist organizations in Canada.* Toronto: PMA Books, 1979. xii, 255 p.

Mann, Edward W. and John Allan Lee. *RCMP vs the people: inside Canada's security service.* Don Mills, Ont.: General Pub., 1979. 290 p.

*A not unreasonable claim: women and reform in Canada, 1880s-1920s.* Edited by Linda Kealey. Toronto: Women's Press, 1979. 233 p.

Olsen, Dennis. *The state elite.* Toronto: McClelland and Stewart, 1980. 153 p.

Porter, John. *The measure of Canadian society: education, equality, and opportunity.* Agincourt, Ont.: Gage Pub., 1979. xv, 300 p.

*Recherches québécoises sur la télévision.* Sous la direction de Annie Méar. Laval, Qué.: Éditions coopératives A. Saint-Martin, 1980. 210 p. (Collection Communication)

*The usable urban past: planning and politics in the modern Canadian city.* Edited by Alan F.J. Artibise and Gilbert A. Stelter. Toronto: Macmillan of Canada; Ottawa: Institute of Canadian Studies, Carleton University, 1979. 383 p. (The Carleton library; no. 119)

*Visible minorities and multiculturalism: Asians in Canada.*

Edited by K. Victor Ujimoto and Gordon Hirabayashi. Scarborough, Ont.: Butterworth (Canada), 1980. ix, 388 p.

**Education**

Charland, Thomas-M. *Le père Gonthier et les écoles du Manitoba: sa mission secrète en 1897-1898*. Montréal: Fides, 1979. 130 p. (L'Église du Québec; 7)

Frost, Stanley Brice. *McGill University, for the advancement of learning*. v.1- . Montréal: McGill-Queen's University Press, 1980- .

Howard, Richard B. *Upper Canada College, 1829-1979: Colborne's legacy*. Toronto: Macmillan of Canada, 1979. xvi, 462 p.

Jameson, Sheila S. *Chautauqua in Canada*. Calgary, Alta.: Glenbow-Alberta Institute, 1979. vi, 161 p.

Lamonde, Yvan. *La philosophie et son enseignement au Québec, 1665-1920*. LaSalle, Qué.: Hurtubise HMH, 1980. 312 p. (Cahiers du Québec; 58: Collection Philosophie)

Leslie, Peter M. *Canadian universities: 1980 and beyond: enrolment, structural change and finance*. Ottawa: Association of Universities and Colleges of Canada, 1980. xii, 446 p. (AUCC policy studies; no. 3)

*Schooling and society in twentieth century British Columbia*. Edited by J. Donald Wilson and David C. Jones. Calgary, Alta.: Detselig Enterprises, 1980. 191 p.

**Religion**

*The believer's church in Canada: addresses and papers from the study conference in Winnipeg, May 15-18, 1978*. Edited by Jarold K. Zeman, Walter Klassen and John D. Rempel. Brantford, Ont.: Baptist Federation of Canada; Winnipeg: Mennonite Central Committee (Canada), 1979. xv, 410 p.

Hardy, René. *Les zouaves: une stratégie du clergé québécois au 19<sup>e</sup> siècle*. Montréal: Éditions du Boréal express, 1980. 312 p.

Savard, Pierre. *Aspects du catholicisme canadien-français au 19<sup>e</sup> siècle*. Montréal: Fides, 1980. 196 p. (Collection Essais et recherches: Section histoire)

Simard, Jean. *Un patrimoine méprisé: la religion populaire des Québécois*. LaSalle, Qué.: Hurtubise HMH, 1979. x, 309 p. (Cahiers du Québec; 46: Collection Ethnologie)

**Environment**

*Canada and the sea*. Edited by Rowland Lorimer and Stanley E. McMullin. Willowdale, Ont.: Association of Canadian Studies, 1980. 208 p. (Canadian issues, v.3, no. 1, Spring 1980)

*Coastal resources in the future of BC*. Edited by Anthony H.J. Dorsey. Vancouver: Westwater Research Centre, University of British Columbia, 1979. xi, 126 p. (Westwater lectures; 1979)

*Ecology versus politics in Canada*. Edited by William Leiss for the University League for Social Reform. Toronto: University of Toronto Press, 1979. xiv, 282 p.

**Science and technology**

Bregha, François. *Bob Blair's pipeline: the business and politics of northern energy development projects*. Toronto: J. Lorimer, 1979. 220 p.

*Canadian nuclear policies: proceedings of a conference on Canadian nuclear policy sponsored by the School of Public Administration and the Norman Paterson School of International Affairs, Carleton University and the Science Council of Canada, 8-10 November 1978*. Edited by G. Bruce Doern and Robert W. Morrison. Montréal: Institute for Research on Public Policy, 1980. xvi, 326 p.

Childerhose, R.J. and Marj Trim. *Pacific salmon & steelhead trout*. Vancouver, B.C.: Douglas & McIntyre, 1979. 158 p.

Dupont, Jean-Claude. *L'artisan forgeron*. Québec: Presses de l'Université Laval: Éditeur officiel du Québec, 1979. xxxii, 355 p. (Collection Format: Série histoire des métiers d'art)

Gillett, John M. *Transactions of the Ottawa Field-Naturalists' Club and The Ottawa Naturalist index*. Edited by William J. Cody. Ottawa: Ottawa Field-Naturalists' Club, 1980. iv, 195 p. (Special publication; no. 2)

Godfrey, Charles M. *Medicine for Ontario: a history*. Belleville, Ont.: Mika Pub., 1979. 302 p.

Griffiths, Deirdre. *Island forest year: Elk Island National Park*. Edmonton: University of Alberta Press, 1979. ix, 257 p.

Hogue, Clarence, André Bolduc et Daniel Larouche. *Québec: un siècle d'électricité*. Montréal: Libre expression, 1979. 406 p.

Kerr, Robert B. *History of the Medical Council of Canada*. Ottawa: Medical Council of Canada, 1979. xv, 131 p.

Lamson, Cynthia. *"Bloody decks and a bumper crop": the rhetoric of sealing counter-protest*. St. John's, Nfld.: Institute of Social and Economic Research, Memorial University of Newfoundland, 1979. viii, 113 p. (Memorial University of Newfoundland. Social and economic studies; no. 24)

Mansell, William and Gary Low. *North American birds of prey*. Agincourt, Ont.: Gage Pub., 1980. 176 p.

Milberry, Larry. *Aviation in Canada*. Scarborough, Ont.: McGraw-Hill Ryerson, 1979. 272 p.

Moussette, Marcel. *La pêche sur le Saint-Laurent: répertoire des méthodes et des engins de capture*. Montréal: Éditions du Boréal express, 1979. 212 p. (Collection Mékinac; 4)

Québec (Province) Ministère des communications. *La science et le pouvoir au Québec, 1920-1965*. Par Raymond Duchesne. Québec: Éditeur officiel du Québec, 1979. xxiii, 126 p. (Collection Études et dossiers)(La documentation québécoise)

Tataryn, Lloyd. *Dying for a living*. Ottawa: Deneau & Greenberg, 1979. 249 p.

### THIRD SECTION

#### General reference works

Bergeron, Léandre. *The québécois dictionary*. Toronto: James Lorimer, 1982. 207 p.

*Encyclopedia of music in Canada*. Edited by Helmut Kallman, Gilles Potvin and Kenneth Winters. Toronto: University of Toronto Press, 1981. 1076 p.

Hamilton, Robert M. and Dorothy, Shields. *The dictionary of Canadian quotations and phrases*. Rev. ed. Toronto: McClelland and Stewart, 1982. 1064 p.

*The Oxford Companion to Canadian Literature*. Edited by William Toye. Toronto: Oxford University Press, 1983. 843 p.

Ripley, Gordon and Anne V. Mercer. *Who's who in Canadian literature*. Toronto: Reference Press, 1983. 425 p.

Story, G.M., W.J. Kirwin, and J.D.A. Widdowson. *Dictionary of Newfoundland English*. Toronto: University of Toronto Press, 1982. 625 p.

#### Biography

*Debrett's illustrated guide to the Canadian establishment*. Edited by Peter C. Newman. Toronto: Methuen, 1983. 408 p.

Newman, Peter C. *The establishment man: a portrait of power*. Toronto: McClelland and Stewart, 1982. 333 p.

Ondaatje, Michael. *Running in the family*. Toronto: McClelland and Stewart, 1982. 224 p.

#### Fine arts and performing arts

Brighurst, Robert et al. *Visions: contemporary art in Canada*. Vancouver: Douglas and McIntyre, 1983. 240 p.

*Cinéastes québécois: dossier de presse*. Sherbrooke: Bibliothèque du Séminaire de Sherbrooke, 1981. 108 p.

*Glenn Gould: variations*. Edited by John McGreevy. Toronto: Doubleday and Company, 1983. 319 p.

Macdonald, George F. *Haida monumental art: villages of the Queen Charlotte Islands*. Illustrated by Bill Reid. Vancouver: University of British Columbia Press, 1983. 218 p.

Miller, Mark. *Jazz in Canada: fourteen lives*. Toronto: University of Toronto Press, 1982. 245 p.

#### Linguistics and literature

Légaré, Yves. *Dictionnaire des écrivains québécois contemporains*. Montréal: Québec/Amérique, 1983. 399 p.

#### Sports

Dryden, Ken. *The Game: A reflective and thought-provoking look at a life in hockey*. Toronto: Macmillan, 1983. 272 p.

#### General history

Dancocks, Daniel G. *In enemy hands: Canadian prisoners of war, 1939-1945*. Edmonton: Hurtig Publishers Ltd., 1983. 336 p.

Goldenburg, Susan. *Canadian Pacific: a portrait of power*. Toronto: Methuen, 1983. 316 p.

Roberts, Kenneth and Philip Shackleton. *The canoe: a history of the craft from Panama to the Arctic*. Toronto: Macmillan, 1983. 288 p.

#### Economics

Stewart, Walter. *Towers of gold, feet of clay: the Canadian banks*. Toronto: Collins, 1982. 320 p.

#### Government and politics

McWhinney, Edward. *Canada and the constitution 1979-1982*. Toronto: University of Toronto Press, 1982. 227 p.

Ritchie, Charles. *More undiplomatic diaries, 1962-1971*. Toronto: Macmillan, 1983. 192 p.

Sawatsky, John. *For services rendered: Leslie James Bennett and the RCMP security service*. Toronto: Doubleday and Company, 1982. 339 p.

Taylor, Charles. *Radical Tories: the Conservative tradition in Canada*. Toronto: House of Anansi Press, 1982. 231 p.

#### Science and Technology

Bliss, Michael. *The discovery of insulin*. Toronto: McClelland and Stewart, 1982. 312 p.

Whiteson, Leon. *Modern Canadian architecture*. Edmonton: Hurtig, 1983. 272 p.

## APPENDIX 7

# CANADA YEAR BOOK SPECIAL ARTICLES

Background articles on many subjects, published in previous editions of the *Canada Year Book*, are of continuing interest for reference. The following index lists articles by subject, title, author, year of edition and page numbers.

### Agriculture

Historical background of Canadian agriculture, G.S.H. Barton. 1939. pp 187-90.

The major soil zones and regions of Canada, P.C. Stobbe. 1951. pp 352-6.

The Board of Grain Commissioners, W.J. MacLeod. 1960. pp 957-8.

The Canadian Wheat Board and its role in grain marketing, C.B. Davidson. 1960. pp 958-60.

Changes in Canadian agriculture as reflected by the census of 1961. 1963-64. pp 409-15.

Contribution of the Canada Department of Agriculture to modern agricultural science. 1966. pp 457-61.

Federal assistance in livestock improvement. 1967. pp 453-7.

The role of government in the grains industry. 1972. pp 1021-8.

### Banking and finance

The Bank of Canada and its relationship to the financial system. 1937. pp 881-5.

Historical sketch of currency and banking. 1938. pp 900-6.

Wartime control under the Foreign Exchange Control Board, R.H. Tarr. 1941. pp 833-5; 1942. pp 830-3.

Commercial banking in Canada, J. Douglas Gibson. 1961. pp 1115-20.

### Citizenship

Early naturalization procedure and events leading up to the Canadian Citizenship Act. 1951. pp 153-5.

### Climate and meteorology

Factors which control Canadian weather, Sir Frederick Stupart. 1925. pp 36-40.

Temperature and precipitation of northern Canada, A.J. Connor. 1930. pp 41-56.

Droughts in western Canada, A.J. Connor. 1933. pp 47-59.

The climate of Canada, C.C. Boughner and M.K. Thomas. 1959. pp 23-51; 1960. pp 31-77.

The climate of the Canadian Arctic, H.A. Thompson. 1967. pp 55-74.

### Communications

The democratic functioning of the press, W.A. Buchanan. 1945. pp 744-8.

History and development of the Canadian Broadcasting Corporation, Augustin Frigon. 1947. pp 737-40.

A history of Canadian journalism, 1752-(circa) 1900, W.H. Kesterton. 1957-58. pp 920-34.

A history of Canadian journalism (circa) 1900-1958, W.H. Kesterton. 1959. pp 883-902.

The development of telecommunications in Canada, M.E. Callin. 1967. pp 862-9.

### Constitution and government

Provincial and local government. 1922-23. pp 101-15.

The evolution of the constitution of Canada down to Confederation, S.A. Cudmore and E.H. Coleman. 1942. pp 34-40.

The British North America Act, 1867. 1942. pp 40-59.

Canada's growth in external status, F.H. Soward. 1945. pp 74-9.

The constitutional development of Newfoundland prior to union with Canada, 1949. 1950. pp 85-92.

The terms of union of Newfoundland with Canada, 1949. 1951. pp 56-7.

The Privy Council office and cabinet secretariat in relation to the development of cabinet government, W.E.D. Halliday. 1956. pp 62-70.

Amendment of the Canadian constitution, J.R. Mallory. 1961. pp 51-7.

Yukon Territory and Northwest Territories (historical and current administration of). 1968. pp 110-6.

The cabinet committee system. 1970-71. pp 79-84.

**Crime and delinquency**

A historical sketch of criminal law and procedure, R.E. Watts. 1932. pp 897-9.

The influence of the Royal Canadian Mounted Police in the building of Canada, S.T. Wood. 1950. pp 317-31.

**Education**

Report of the Royal Commission on national development in the arts, letters and sciences. 1952-53. pp 342-5.

Structural changes in tertiary education in Canada, Miles Wisenthal and Eve Kassirer. 1972. pp 370-7.

**Fauna and flora**

Faunas of Canada, P.A. Taverner. 1922-23. pp 32-6.

Faunas of Canada, R.M. Anderson. 1937. pp 29-52.

Migratory bird protection in Canada. 1951. pp 38-43.

The barren-ground caribou. 1954. pp 33-6.

Migratory bird legislation. 1955. pp 41-5.

The musk-ox. 1957-58. pp 28-30.

Provincial government wildlife conservation measures. 1963-64. pp 46-52.

The flora of Canada, H.J. Scoggan. 1966. pp 35-61.

Animal life in Canada today, scientists of the zoology division, National Museum of Canada. 1968. pp 47-60.

**Fisheries**

Groundfish species in the Canadian fisheries, T.H. Turner. 1957-58. pp 591-5.

Canada's commercial fishery resources and their conservation. 1960. pp 625-30.

**Forestry**

Physiography, geology and climate as affecting the forests. 1934-35. pp 311-3.

The pulp and paper industry in Canada. 1952-53. pp 467-75.

The federal-provincial forestry agreements, H.W. Beall. 1956. pp 459-66.

The Pulp and Paper Research Institute of Canada, Rielle Thomson. 1957-58. pp 489-91.

Canadian forest products and changing world markets, J.T.B. Kingston. 1965. pp 511-7.

**Fur trade**

The development of marshlands in relation to fur production in the rehabilitation of fur-bearers, D.J. Allan. 1943-44. pp 267-9.

The fur industry, W.M. Ritchie. 1961. pp 618-22.

**Geology**

Geology in relation to agriculture, Wyatt Malcolm. 1921. pp 68-72.

The Geological Survey of Canada, J.M. Harrison. 1960. pp 13-9.

Geology and economic minerals of Canada, W.D. McCartney. 1967. pp 19-32.

**History**

Canadian chronology, 1497-1960. 1951-60. History (Chapter 2). 1973. pp 48-68.

**Labour**

History of the labour movement in Canada, Eugene Forsey. 1967. pp 773-81.

**Manufactures**

Changes in Canadian manufacturing production from peace to war, 1939-44. 1945. pp 364-81.

Manufacturing production during the period 1945-59, A. Cohen. 1962. pp 600-9.

The petrochemical industry in Canada, G.E. McCormack. 1962. pp 609-15.

Secondary manufacturing in Canada, W.L. Posthumus. 1963-64. pp 637-43.

Manufacturing and the changing industrial structure of the Canadian economy, 1946-65. 1967. pp 665-78.

Technology, markets and costs in manufacturing. 1968. pp 689-94.

Origin and destination of Canadian manufacturers' shipments. 1970-71. pp 794-9.

Trends in the number of manufacturing establishments. 1972. pp 768-78.

**Metric conversion**

Canada converts to the metric system. 1976-77. pp vi-xiv.

**Mining**

Mines and minerals — a historical sketch. 1939. pp 309-10.

The coal deposits and coal resources of Canada, B.R. MacKay. 1946. pp 337-47.

History of pipeline construction in Canada, G.S. Hume. 1954. pp 861-9.

Canadian metallurgical development, John Convey. 1961. pp 513-22.

Geology and economic minerals of Canada, W.D. McCartney. 1967. pp 19-32.

Fuels in Canada, A. Ignatieff. 1969. pp 637-45.

Federal research advances Canadian mineral development, John Convey. 1970-71. pp 723-30.

### **Physiography and related sciences**

Physical geography of the Canadian eastern Arctic, R.A. Gibson. 1945. pp 12-9.

Hydrographical features, F.C.G. Smith. 1947. pp 3-12.

Physical geography of the Canadian western Arctic, R.A. Gibson. 1948-49. pp 9-18.

The drainage basins of Canada. 1961. pp 16-8.

Economic regions of Canada, N.L. Nicholson. 1962. pp 17-23.

Main physical and economic features of the provinces and territories. 1963-64. pp 4-20.

Geophysics, G.S. Garland. 1963-64. pp 57-60.

Federal government surveying and mapping, Mary J. Giroux. 1965. pp 17-24.

Astronomy in Canada, Ian Halliday. 1965. pp 47-55.

Growth of geographical knowledge of Canada, Trevor Lloyd. 1967. pp 1-6.

Geology and economic minerals of Canada, W.D. McCartney. 1967. pp 19-32.

Archaeology in Canada, scientists of the National Museum of Man. 1968. pp 20-9.

Resource and economic development north of the 60th parallel. 1970-71. pp 58-64.

Regional geography of Canada, J. Lewis Robinson. 1972. pp 1-26.

### **Population**

Occupational trends in Canada, 1891-1931, A.H. LeNeveu. 1939. pp 774-8.

Developments in Canadian immigration. 1957-58. pp 154-76.

Integration of postwar immigrants. 1959. pp 176-8.

Use of the English and French languages in Canada, A.H. LeNeveu. 1965. pp 180-4.

Mobility of Canada's population, 1956-1961, Y. Kasahara. 1966. pp 179-87.

Recent trends in urbanization and metropolitan growth, Leroy O. Stone and Frances Aubry. 1969. pp 156-65.

Trends in population growth in Canada with special reference to the decline in fertility, M.V. George. 1970-71. pp 213-20.

### **Research**

The International Geophysical Year, D.C. Rose. 1957-58. pp 35-8.

The Fisheries Research Board, J.L. Kask. 1959. pp 584-8.

Geophysics, G.S. Garland. 1963-64. pp 57-60.

The Fisheries Research Board of Canada. 1963-64. pp 612-4.

Astronomy in Canada, Ian Halliday. 1965. pp 47-55.

A selection of Canadian achievements in science and technology, 1800-1964, John R. Kohr. 1965. pp 398-401.

### **Trade**

Canada's participation in the changing pattern of world trade, 1953-66, A.M. Coll. 1967. pp 953-66.

Canada's international trade after the Kennedy round of trade negotiations, G.A. Richardson. 1968. pp 946-54.

Canada's trade with the European Economic Community, D. Paul Ojha. 1969. pp 977-85.

Canada's trade with the Pacific Rim countries, M.P. Mathew. 1970-71. pp 1069-78.

The Canada-United States automotive products agreement, W.M. MacLeod. 1972. pp 1058-69.

### **Transportation**

The development of aviation in Canada, J.A. Wilson. 1938. pp 710-2.

Pre-war civil aviation and the defence program, J.A. Wilson. 1941. pp 608-12.

International Civil Aviation Organization and Canada's participation therein, C.S. Booth. 1952-53. pp 820-7.

Canals of the St. Lawrence waterway. 1954. pp 830-3.

History of the Canadian National Railways. 1955. pp 840-51.

The St. Lawrence Seaway. 1955. pp 885-8.

Traffic on the Great Lakes-St. Lawrence Seaway. 1956. pp 821-9.

The St. Lawrence Seaway in operation, S. Judek. 1960. pp 851-60.

Revolution in Canadian transportation, A.W. Currie. 1962. pp 753-8.

An outline of the development of civil air transport in Canada, J.R.K. Main. 1967. pp 838-43.

The first decade of the Seaway, Pierre Camu. 1969. pp 841-5.



# APPENDIX 8

---

## POLITICAL UPDATE

To supplement the information in Chapter 19, Government, the following lists give the names of the cabinet ministers of Canada in June, July and September 1984, the Senate, members of the Privy Council and the executive councils of the provinces and territories. Data on members of the House of Commons voted into office in federal general elections are given in Tables 19.4 and 19.5 in Chapter 19.

### Cabinet ministers

**Members of the 24th ministry.** In September 1984 the following were ministers of the federal cabinet according to precedence:

- Prime Minister, The Rt. Hon. Martin Brian Mulroney
- Minister of Veterans Affairs, The Hon. George Harris Hees
- Leader of the Government in the Senate, The Hon. Dufferin (Duff) Roblin
- Secretary of State for External Affairs, The Rt. Hon. Charles Joseph (Joe) Clark
- Minister of Employment and Immigration, The Hon. Flora Isabel MacDonald
- Deputy Prime Minister and President of the Queen's Privy Council for Canada, The Hon. Erik H. Nielsen
- Minister of Justice and Attorney General of Canada, The Hon. John Carnell Crosbie
- Minister of Public Works, The Hon. Roch LaSalle
- Minister of Transport, The Hon. Donald Frank Mazankowski
- Solicitor General of Canada, The Hon. Elmer MacIntosh MacKay
- Minister of National Health and Welfare, The Hon. Arthur Jacob (Jake) Epp
- Minister of Fisheries and Oceans, The Hon. John Allen Fraser
- Minister of Regional Industrial Expansion, The Hon. Sinclair McKnight Stevens
- Minister of Agriculture, The Hon. John Wise
- Minister of State (Government House Leader), The Hon. Ramon (Ray) John Hnatyshyn

- Minister of Indian Affairs and Northern Development, The Hon. David Edward Crombie
- President of the Treasury Board, The Hon. Robert René de Cotret
- Minister of National Revenue, The Hon. Henry Perrin Beatty
- Minister of Finance, The Hon. Michael Halcombe Wilson
- Minister of National Defence, The Hon. Robert Carman Coates
- Minister of State (Multiculturalism), The Hon. Jack Burnett Murta
- Minister of Supply and Services, The Hon. Harvie Andre
- Minister of State (Fitness and Amateur Sport), The Hon. Otto John Jelinek
- Minister of State for Science and Technology, The Hon. Thomas Edward Siddon
- Minister of State (Canadian Wheat Board), The Hon. Charles James Mayer
- Minister of Labour, The Hon. William Hunter McKnight
- Secretary of State of Canada, The Hon. Walter Franklin McLean
- Minister of State (Tourism), The Hon. Thomas Michael McMillan
- Minister of Energy, Mines and Resources, The Hon. Patricia Carney
- Minister of State (Small Businesses), The Hon. André Bissonnette
- Minister of the Environment, The Hon. Suzanne Blais-Grenier
- Minister of State (Transport), The Hon. Benoît Bouchard
- Minister of State (Youth), The Hon. Andrée Champagne
- Minister of Consumer and Corporate Affairs, The Hon. Michel Côté
- Minister for International Trade, The Hon. James Francis Kelleher
- Minister of State (Mines), The Hon. Robert E. Layton
- Minister of Communications, The Hon. Marcel Masse

Minister of State (Finance), The Hon. Barbara Jean McDougall

Minister of State (Forestry), The Hon. Gerald S. Merrithew

Minister for External Relations, The Hon. Monique Vézina.

**Members of the 23rd ministry.** In July 1984 the following were ministers of the federal cabinet according to precedence:

Prime Minister, The Rt. Hon. John Napier Turner

Leader of the Government in the Senate, The Hon. Allan Joseph MacEachen

Deputy Prime Minister and Secretary of State for External Affairs, The Hon. Jean Chrétien

President of the Treasury Board, The Hon. Herbert Eser Gray

President of the Queen's Privy Council for Canada, Minister of State for Economic and Regional Development, Minister of Labour and Minister responsible for Canada Post Corporation, The Hon. André Ouellet

Minister of Finance, The Hon. Marc Lalonde

Minister of Employment and Immigration, The Hon. John Roberts

Minister of National Health and Welfare, The Hon. Monique Bégin

Minister of National Defence, The Hon. Jean-Jacques Blais

Minister for International Trade, The Hon. Francis Fox

Minister of Energy, Mines and Resources, The Hon. Gerald Regan

Solicitor General of Canada, The Hon. Robert Phillip Kaplan

Minister of State (Transport), The Hon. William Rompkey

Minister of Supply and Services and Minister of Public Works, The Hon. Charles Lapointe

Minister of Regional Industrial Expansion, Minister of Communications and Minister of State for Science and Technology, The Hon. Edward Lumley

Minister of Justice and Attorney General of Canada, The Hon. Donald J. Johnston

Minister of Transport, Minister responsible for the Canadian Wheat Board, Minister responsible for the Canada Harbour Place Corporation (Expo 86) and Minister responsible for the Northern Pipeline Agency, The Hon. Lloyd Axworthy

Minister of Consumer and Corporate Affairs and Minister of State for Social Development, The Hon. Judy Erola

Minister of the Environment, The Hon. Charles L. Caccia

Secretary of State of Canada, The Hon. Serge Joyal

Minister of Veterans Affairs, The Hon. W. Bennett Campbell

Minister of State (Multiculturalism), The Hon. David Michael Collette

Minister of State (Small Businesses and Tourism), The Hon. David Paul Smith

Minister of National Revenue, The Hon. Roy MacLaren

Minister of Fisheries and Oceans, The Hon. Herbert Breaux

Minister of State (Regional Development), The Hon. Joseph Roger Rémi Bujold

Minister of State (Youth) and Minister of State (Fitness and Amateur Sport), The Hon. Jean-C. Lapierre

Minister of Agriculture, The Hon. Ralph Ferguson

Minister of Indian Affairs and Northern Development, The Hon. Douglas Cockburn Frith.

**Members of the 22nd ministry.** In June 1984 the following were ministers of the federal cabinet according to precedence:

Prime Minister, The Rt. Hon. Pierre Elliott Trudeau

Deputy Prime Minister and Secretary of State for External Affairs, The Hon. Allan Joseph MacEachen

Minister for External Relations, The Hon. Jean-Luc Pepin

Minister of Energy, Mines and Resources, The Hon. Jean Chrétien

Minister of Indian Affairs and Northern Development, The Hon. John Carr Munro

Leader of the Government in the Senate, The Hon. Horace Andrew (Bud) Olson

President of the Treasury Board, The Hon. Herbert Eser Gray

Minister of Agriculture, The Hon. Eugene Francis Whelan

Minister of Labour, The Hon. André Ouellet

Minister of Finance, The Hon. Marc Lalonde

Minister of Public Works, The Hon. Roméo LeBlanc

Minister of Employment and Immigration, The Hon. John Roberts

Minister of National Health and Welfare, The Hon. Monique Bégin

Minister of National Defence, The Hon. Jean-Jacques Blais

Minister of Communications, The Hon. Francis Fox

Minister of Fisheries and Oceans, The Hon. Pierre De Bané

Minister of State (Canadian Wheat Board), The Hon. Hazen Robert Argue

Minister for International Trade, The Hon. Gerald Regan

Minister of Justice and Attorney General of Canada, The Hon. Mark MacGuigan

Solicitor General of Canada, The Hon. Robert Phillip Kaplan

Minister of State (Mines), The Hon. William Rompkey

Minister of National Revenue, The Hon. Pierre Bussi eres

Minister of Supply and Services, The Hon. Charles Lapointe

Minister of Regional Industrial Expansion, The Hon. Edward Lumley

President of the Queen's Privy Council for Canada, The Hon. Yvon Pinard

Minister of State for Economic and Regional Development and Minister of State for Science and Technology, The Hon. Donald J. Johnston

Minister of Transport, The Hon. Lloyd Axworthy

Minister of Consumer and Corporate Affairs, The Hon. Judy Erola

Minister of State for Social Development, The Hon. Jacob Austin

Minister of the Environment, The Hon. Charles L. Caccia

Secretary of State of Canada, The Hon. Serge Joyal

Minister of Veterans Affairs, The Hon. W. Bennett Campbell

Minister of State (Multiculturalism), The Hon. David Michael Collenette

Minister of State (Youth), The Hon. C eline Hervieux-Payette

Minister of State (Small Businesses and Tourism), The Hon. David Paul Smith

Minister of State (Finance), The Hon. Roy MacLaren

Minister of State (Fitness and Amateur Sport), The Hon. Jacques Olivier.

## The Senate

In October 1984 the representation in the Senate was as follows, listed geographically from east to west by province,

followed by territories, and in each grouping chronologically by appointment:

### Newfoundland

The Hon. William John Petten  
The Hon. Frederick William Rowe  
The Hon. Philip Derek Lewis  
The Hon. Jack Marshall  
The Hon. C. William Doody  
1 vacancy

### Prince Edward Island

The Hon. Florence Elsie Inman  
The Hon. Orville Howard Phillips  
The Hon. Mark Lorne Bonnell  
The Hon. Heath Nelson Macquarrie

### Nova Scotia

The Hon. John Michael Macdonald  
The Hon. Henry D. Hicks  
The Hon. Bernard Alasdair Graham  
The Hon. Augustus Irvine Barrow  
The Hon. Ernest George Cottreau  
The Hon. Robert Muir  
The Hon. John B. Stewart  
The Hon. Michael Kirby  
The Hon. Allan Joseph MacEachen  
1 vacancy

### New Brunswick

The Hon. Fred A. McGrand  
The Hon. Charles Robert McElman  
The Hon. Louis-J. Robichaud  
The Hon. Margaret Jean Anderson  
The Hon. L. Norbert Th  riault  
The Hon. Cyril B. Sherwood  
The Hon. Rom  o Leblanc  
The Hon. Eymard Corbin  
2 vacancies

### Quebec

The Hon. Hartland de Montarville Molson  
The Hon. Louis Philippe Beaubien  
The Hon. Jacques Flynn (Leader of the Opposition)  
The Hon. Azellus Denis  
The Hon. Jean-Paul Deschatelets  
The Hon. J.G. L  opold Langlois  
The Hon. Louis de Gonzague Gigu  re  
The Hon. Paul C. Lafond  
The Hon. Renaude Lapointe  
The Hon. Martial Asselin  
The Hon. Maurice Riel  
The Hon. Pietro Rizzuto  
The Hon. Dalia Wood  
The Hon. Fernand-E. Leblanc  
The Hon. Yvette Boucher Rousseau  
The Hon. Guy Charbonneau (Speaker)  
The Hon. Arthur Tremblay  
The Hon. Jean LeMoine  
The Hon. Jacques H  bert

The Hon. Leo E. Kolber  
 The Hon. Philippe Deane Gigantés  
 The Hon. Charles Watt  
 The Hon. Pierre De Bané  
 The Hon. Tom Lefebvre

### Ontario

The Hon. David A. Croll  
 The Hon. Joseph A. Sullivan  
 The Hon. David James Walker  
 The Hon. Rhéal Bélisle  
 The Hon. Daniel Aiken Lang  
 The Hon. William Moore Benidickson  
 The Hon. Douglas Keith Davey  
 The Hon. Andrew Ernest Thompson  
 The Hon. Richard James Stanbury  
 The Hon. Joan Neiman  
 The Hon. John Morrow Godfrey  
 The Hon. Royce Frith  
 The Hon. Peter Bosa  
 The Hon. Stanley Haidasz  
 The Hon. Lowell Murray  
 The Hon. Peter Alan Stollery  
 The Hon. Peter Michael Pitfield  
 The Hon. William McDonough Kelly  
 The Hon. Ian Sinclair  
 The Hon. Jerahmiel S. Grafstein  
 The Hon. Anne C. Cools  
 The Hon. Lorna Marsden  
 The Hon. Colin Kenny  
 The Hon. Charles Turner

### Manitoba

The Hon. Paul Yuzyk  
 The Hon. Douglas Donald Everett  
 The Hon. Gildas L. Molgat  
 The Hon. Dufferin (Duff) Roblin (Leader of the Government)  
 The Hon. Joseph-Philippe Guay  
 The Hon. Nathan Nurgitz

### Saskatchewan

The Hon. Hazen Robert Argue  
 The Hon. Herbert O. Sparrow  
 The Hon. Sidney L. Buckwold  
 The Hon. David Gordon Steuart  
 The Hon. Reginald James Balfour  
 1 vacancy

### Alberta

The Hon. Donald Cameron  
 The Hon. Earl Adam Hastings  
 The Hon. Horace Andrew (Bud) Olson  
 The Hon. Martha P. Bielish  
 The Hon. Daniel Hays  
 The Hon. Joyce Fairbairn

### British Columbia

The Hon. Ann Elizabeth Bell  
 The Hon. Edward M. Lawson

The Hon. George Clifford van Roggen  
 The Hon. Raymond Joseph Perrault  
 The Hon. Jacob (Jack) Austin  
 The Hon. Leonard Stephen Marchand

### Yukon

The Hon. Paul Lucier

### Northwest Territories

The Hon. Willie Adams.

## The Queen's Privy Council for Canada

The following, with the dates when they were sworn in, were members of the Queen's Privy Council for Canada in September 1984:

The Hon. Lionel Chevrier, April 18, 1945  
 The Hon. Paul Joseph James Martin, April 18, 1945  
 The Hon. Douglas Charles Abbott, April 18, 1945  
 The Hon. Gabriel-Edouard Rinfret, August 25, 1949  
 The Hon. Walter Edward Harris, January 18, 1950  
 The Hon. John Whitney Pickersgill, June 12, 1953  
 The Hon. Paul Theodore Hellyer, April 26, 1957  
 The Hon. Howard Charles Green, June 21, 1957  
 The Hon. Donald Methuen Fleming, June 21, 1957  
 The Hon. George Harris Hees, June 21, 1957  
 The Hon. Léon Balcer, June 21, 1957  
 The Hon. Gordon Churchill, June 21, 1957  
 The Hon. Edmund Davie Fulton, June 21, 1957  
 The Hon. Douglas Scott Harkness, June 21, 1957  
 The Hon. Ellen Louks Fairclough, June 21, 1957  
 The Hon. John Angus MacLean, June 21, 1957  
 The Hon. Michael Starr, June 21, 1957  
 The Hon. William McLean Hamilton, June 21, 1957  
 The Hon. William Joseph Browne, June 21, 1957  
 The Hon. Francis Alvin George Hamilton,  
 August 22, 1957  
 HRH The Prince Philip, Duke of Edinburgh,  
 October 14, 1957  
 The Hon. Henri Courtemanche, May 12, 1958  
 The Hon. David James Walker, August 20, 1959  
 The Hon. Joseph-Pierre-Albert Sévigny,  
 August 20, 1959  
 The Hon. Jacques Flynn, December 28, 1961  
 The Hon. Paul Martineau, August 9, 1962  
 The Hon. Richard Albert Bell, August 9, 1962  
 The Rt. Hon. Roland Michener, October 15, 1962  
 The Hon. Marcel-Joseph-Aimé Lambert,  
 February 12, 1963  
 The Hon. Théogène Ricard, March 18, 1963  
 The Hon. Frank Charles McGee, March 18, 1963  
 The Hon. Martial Asselin, March 18, 1963  
 The Hon. Walter Lockhart Gordon, April 22, 1963  
 The Hon. Mitchell William Sharp, April 22, 1963  
 The Hon. Azellus Denis, April 22, 1963  
 The Hon. George James McLraith, April 22, 1963  
 The Hon. William Moore Benidickson, April 22, 1963  
 The Hon. Lucien Cardin, April 22, 1963  
 The Hon. Ailan Joseph MacEachen, April 22, 1963

- The Hon. Jean-Paul Deschatelets, April 22, 1963  
 The Hon. Hédard Robichaud, April 22, 1963  
 The Hon. John Watson MacNaught, April 22, 1963  
 The Hon. Roger Teillet, April 22, 1963  
 The Hon. Charles Mills Drury, April 22, 1963  
 The Hon. Maurice Sauvé, February 3, 1964  
 The Hon. Yvon Dupuis, February 3, 1964  
 The Hon. Edgar John Benson, June 29, 1964  
 The Hon. Léo Alphonse Joseph Cadieux, February 15, 1965  
 The Hon. Lawrence T. Pennell, July 7, 1965  
 The Hon. Jean-Luc Pepin, July 7, 1965  
 The Hon. Alan Aylesworth Macnaughton, October 25, 1965  
 The Hon. Jean Marchand, December 18, 1965  
 The Hon. Joseph Julien Jean-Pierre Côté, December 18, 1965  
 The Rt. Hon. John Napier Turner, December 18, 1965  
 The Rt. Hon. Pierre Elliott Trudeau, April 4, 1967  
 The Hon. Jean Chrétien, April 4, 1967  
 The Hon. Pauline Vanier, April 11, 1967  
 The Hon. Louis-J. Robichaud, July 5, 1967  
 The Hon. Dufferin (Duff) Roblin, July 5, 1967  
 The Hon. Alexander B. Campbell, July 5, 1967  
 The Hon. Ernest Charles Manning, July 5, 1967  
 The Hon. Joseph Robert Smallwood, July 5, 1967  
 The Hon. Robert L. Stanfield, July 7, 1967  
 The Hon. Charles Ronald McKay Granger, September 25, 1967  
 The Hon. Bryce Stuart Mackasey, February 9, 1968  
 The Hon. Donald Stovel Macdonald, April 20, 1968  
 The Hon. John Carr Munro, April 20, 1968  
 The Hon. Gérard Pelletier, April 20, 1968  
 The Hon. Jack Davis, April 26, 1968  
 The Hon. Horace Andrew (Bud) Olson, July 6, 1968  
 The Hon. Jean-Eudes Dubé, July 6, 1968  
 The Hon. Stanley Ronald Basford, July 6, 1968  
 The Hon. Donald Campbell Jamieson, July 6, 1968  
 The Hon. Eric William Kierans, July 6, 1968  
 The Hon. James Armstrong Richardson, July 6, 1968  
 The Hon. Otto Emil Lang, July 6, 1968  
 The Hon. Herbert Eser Gray, October 20, 1969  
 The Hon. Robert Douglas George Stanbury, October 20, 1969  
 The Hon. Jean-Pierre Goyer, December 22, 1970  
 The Hon. Alastair William Gillespie, August 12, 1971  
 The Hon. Martin Patrick O'Connell, August 12, 1971  
 The Hon. Patrick Morgan Mahoney, January 28, 1972  
 The Hon. Stanley Haidasz, November 27, 1972  
 The Hon. Eugene Francis Whelan, November 27, 1972  
 The Hon. W. Warren Allmand, November 27, 1972  
 The Hon. James Hugh Faulkner, November 27, 1972  
 The Hon. André Ouellet, November 27, 1972  
 The Hon. Marc Lalonde, November 27, 1972  
 The Rt. Hon. Jeanne Sauvé, November 27, 1972  
 The Hon. Lucien Lamoureux, June 10, 1974  
 The Hon. Raymond Joseph Perrault, August 8, 1974  
 The Hon. Barnett Jerome Danson, August 8, 1974  
 The Hon. J. Judd Buchanan, August 8, 1974  
 The Hon. Roméo LeBlanc, August 8, 1974  
 The Hon. Muriel McQueen Fergusson, November 7, 1974  
 The Hon. Pierre Juneau, August 29, 1975  
 The Hon. Marcel Lessard, September 26, 1975  
 The Hon. Jack Sydney George Cullen, September 26, 1975  
 The Hon. Leonard Stephen Marchand, September 15, 1976  
 The Hon. John Roberts, September 15, 1976  
 The Hon. Monique Bégin, September 15, 1976  
 The Hon. Jean-Jacques Blais, September 15, 1976  
 The Hon. Francis Fox, September 15, 1976  
 The Hon. Anthony Chisholm Abbott, September 15, 1976  
 The Hon. Iona Campagnolo, September 15, 1976  
 The Hon. Joseph-Philippe Guay, November 3, 1976  
 The Hon. John Henry Horner, April 21, 1977  
 The Hon. Norman A. Cafik, September 16, 1977  
 The Hon. J. Gilles Lamontagne, January 19, 1978  
 The Hon. John M. Reid, November 24, 1978  
 The Hon. Pierre De Bané, November 24, 1978  
 The Rt. Hon. Charles Joseph (Joe) Clark, June 4, 1979  
 The Hon. Flora MacDonald, June 4, 1979  
 The Hon. James A. McGrath, June 4, 1979  
 The Hon. Erik H. Nielsen, June 4, 1979  
 The Hon. Allan Frederick Lawrence, June 4, 1979  
 The Hon. John Carnell Crosbie, June 4, 1979  
 The Hon. David S.H. MacDonald, June 4, 1979  
 The Hon. Lincoln Alexander, June 4, 1979  
 The Hon. Roch LaSalle, June 4, 1979  
 The Hon. Donald Frank Mazankowski, June 4, 1979  
 The Hon. Elmer MacIntosh MacKay, June 4, 1979  
 The Hon. Arthur Jacob (Jake) Epp, June 4, 1979  
 The Hon. John Allen Fraser, June 4, 1979  
 The Hon. William Jarvis, June 4, 1979  
 The Hon. Allan McKinnon, June 4, 1979  
 The Hon. Sinclair McKnight Stevens, June 4, 1979  
 The Hon. John Wise, June 4, 1979  
 The Hon. Ronald George Atkey, June 4, 1979  
 The Hon. Ramon (Ray) John Hnatyshyn, June 4, 1979  
 The Hon. David Edward Crombie, June 4, 1979  
 The Hon. Robert René de Cotret, June 4, 1979  
 The Hon. William Heward Graffey, June 4, 1979  
 The Hon. Henry Perrin Beatty, June 4, 1979  
 The Hon. J. Robert Howie, June 4, 1979  
 The Hon. Steven Eugene Paproski, June 4, 1979  
 The Hon. Ronald Huntington, June 4, 1979  
 The Hon. Michael Halcombe Wilson, June 4, 1979  
 The Hon. Renaude Lapointe, November 30, 1979  
 The Hon. Stanley Howard Knowles, November 30, 1979  
 The Hon. Hazen Robert Argue, March 3, 1980  
 The Hon. Gerald Regan, March 3, 1980  
 The Hon. Mark MacGuigan, March 3, 1980  
 The Hon. Robert Phillip Kaplan, March 3, 1980  
 The Hon. James Sydney Fleming, March 3, 1980  
 The Hon. William Rompkey, March 3, 1980  
 The Hon. Pierre Bussièrès, March 3, 1980  
 The Hon. Charles Lapointe, March 3, 1980  
 The Hon. Edward Lumley, March 3, 1980  
 The Hon. Yvon Pinard, March 3, 1980  
 The Hon. Donald J. Johnston, March 3, 1980  
 The Hon. Lloyd Axworthy, March 3, 1980  
 The Hon. Paul Cosgrove, March 3, 1980  
 The Hon. Judy Erola, March 3, 1980

The Hon. James A. Jerome, February 16, 1981  
 The Hon. Jacob (Jack) Austin, September 22, 1981  
 The Hon. Charles L. Caccia, September 22, 1981  
 The Hon. Serge Joyal, September 22, 1981  
 The Hon. W. Bennett Campbell, September 22, 1981  
 The Hon. Robert Gordon Robertson, March 2, 1982  
 The Hon. Edward Broadbent, April 17, 1982  
 The Hon. Richard Bennett Hatfield, April 17, 1982  
 The Hon. William Grenville Davis, April 17, 1982  
 The Hon. Allan Emrys Blakeney, April 17, 1982  
 The Hon. E. Peter Lougheed, April 17, 1982  
 The Hon. William Richards Bennett, April 17, 1982  
 The Hon. John MacLellan Buchanan, April 17, 1982  
 The Hon. Alfred Brian Peckford, April 17, 1982  
 The Hon. James Matthew Lee, April 17, 1982  
 The Hon. Howard Russell Pawley, April 17, 1982  
 The Hon. Sterling Rufus Lyon, April 17, 1982  
 The Hon. David Michael Collette, August 12, 1983  
 The Hon. Céline Hervieux-Payette, August 12, 1983  
 The Hon. Roger Simmons, August 12, 1983  
 The Hon. David Paul Smith, August 12, 1983  
 The Hon. Roy MacLaren, August 17, 1983  
 The Hon. Jacques Olivier, January 10, 1984  
 The Rt. Hon. Brian Dickson, April 19, 1984  
 The Hon. Robert B. Bryce, April 19, 1984  
 The Hon. Peter Michael Pitfield, April 19, 1984  
 The Rt. Hon. Martin Brian Mulroney, May 7, 1984  
 The Rt. Hon. Edward Richard Schreyer, June 3, 1984  
 The Hon. Herbert Breau, June 30, 1984  
 The Hon. Joseph Roger Rémi Bujold, June 30, 1984  
 The Hon. Jean-C. Lapierre, June 30, 1984  
 The Hon. Ralph Ferguson, June 30, 1984  
 The Hon. Douglas Cockburn Frith, June 30, 1984  
 The Hon. Robert Carman Coates, September 17, 1984  
 The Hon. Jack Burnett Murta, September 17, 1984  
 The Hon. Harvie Andre, September 17, 1984  
 The Hon. Otto John Jelinek, September 17, 1984  
 The Hon. Thomas Edward Siddon, September 17, 1984  
 The Hon. Charles James Mayer, September 17, 1984  
 The Hon. William Hunter McKnight, September 17, 1984  
 The Hon. Walter Franklin McLean, September 17, 1984  
 The Hon. Thomas Michael McMillan, September 17, 1984  
 The Hon. Patricia Carney, September 17, 1984  
 The Hon. André Bissonnette, September 17, 1984  
 The Hon. Suzanne Blais-Grenier, September 17, 1984  
 The Hon. Benoît Bouchard, September 17, 1984  
 The Hon. Andrée Champagne, September 17, 1984  
 The Hon. Michel Côté, September 17, 1984  
 The Hon. James Francis Kelleher, September 17, 1984  
 The Hon. Robert E. Layton, September 17, 1984  
 The Hon. Marcel Masse, September 17, 1984  
 The Hon. Barbara Jean McDougall, September 17, 1984  
 The Hon. Gerald S. Merrithew, September 17, 1984  
 The Hon. Monique Vézina, September 17, 1984.

## Newfoundland

Premier and Minister responsible for Intergovernmental Affairs, The Hon. Alfred Brian Peckford

President of the Executive Council and Government House Leader, The Hon. William Marshall, QC

Minister of Finance, The Hon. Dr. John Collins

Minister of Justice, The Hon. Gerald Ottenheimer

Minister of Mines and Energy and Minister of Transportation, The Hon. Ron G. Dawe

Minister of Development, The Hon. Neil Windsor

Minister of Health, The Hon. Wallace House

Minister of Fisheries, The Hon. James Morgan

Minister of Rural Agricultural and Northern Development, The Hon. Joseph Goudie

Minister of Labour and Manpower, The Hon. Jerome Dinn

Minister of Social Services, The Hon. T.V. Hickey

Minister of Forest Resources and Lands, The Hon. Charles Power

Minister of Public Works and Services, The Hon. Haig Young

Minister of Municipal Affairs, The Hon. Hazel R. Newhook

Minister of Education, The Hon. Lynn Verge

Minister of Environment, The Hon. H. Andrews

Minister of Culture, Recreation and Youth, The Hon. L. Simms

Minister responsible for Communications, The Hon. N. Doyle.

## Prince Edward Island

Premier and President of the Executive Council, The Hon. James Matthew Lee

Minister of Finance and Tourism, The Hon. Lloyd G. MacPhail

Minister of Justice and Attorney General and Minister of Community and Cultural Affairs, The Hon. George R. McMahon, QC

Minister of Industry, The Hon. Patrick G. Binns

Minister of Agriculture, The Hon. Prowse G. Chappell

Minister of Energy and Forestry, The Hon. Frederick L. Driscoll

Minister of Health and Social Services, The Hon. Albert P. Fogarty

Minister of Fisheries and Labour, The Hon. R.B. (Roddy) Pratt

## Provincial governments

The following were the executive councils of the provinces, from east to west across Canada, and the territories in May 1984.

Minister of Education, The Hon. Leone Bagnall

Minister of Transportation and Public Works, The Hon. Gordon Lank.

#### Nova Scotia

Premier, President of the Executive Council, Chairman of the Policy Board and Minister of Intergovernmental Affairs, The Hon. John MacLellan Buchanan, QC

Minister of Development, Minister in charge of administration of the Research Foundation Corporation Act, The Hon. Roland J. Thornhill

Minister without portfolio, The Hon. George Henley

Minister of Health, Minister in charge of administration of the Drug Dependency Act and Registrar General, The Hon. Gerald Sheehy, DVM

Minister of Agriculture and Marketing, The Hon. Roger S. Bacon

Minister of Transportation, The Hon. John MacIsaac

Minister of Lands and Forests, The Hon. Kenneth Streach

Attorney General, Provincial Secretary and Minister in charge of administration of the Regulations Act, The Hon. Ronald C. Giffin, QC

Minister of Education and Minister in charge of administration of the Advisory Council on the Status of Women Act, The Hon. Terence R.B. Donahoe, QC

Minister of Municipal Affairs, The Hon. Thomas J. McInnis

Minister of Mines and Energy, The Hon. Joel R. Matheson, QC

Minister of Consumer Affairs, Minister in charge of administration of Residential Tenancies Act, Minister in charge of administration of the Human Rights Act and Chairman, Board of Social Development, Policy Board, The Hon. Laird Stirling

Minister of Government Services and Minister in charge of administration of Communications and Information Act, The Hon. Gerald Lawrence

Minister of Social Services, The Hon. Edmund Morris

Chairman of Management Board (Treasury Board and CSC), Minister in charge of administration of the Civil Service Act, and Minister in charge of the Liquor Control Act, The Hon. Ronald S. Russell

Minister of Tourism, The Hon. R. Fisher Hudson, QC

Minister of Finance, The Hon. Greg Kerr

Minister of Housing, The Hon. Michael A. Laffin, D.D.S.

Minister of Fisheries, The Hon. John G. Leefe

Minister of the Environment, The Hon. George C. Moody

Minister in charge of administration of the EMO (NS) Act and Regulations and Chairman, Board of Resource Development, Policy Board, The Hon. Milne C. Pickings

Minister of Labour and Manpower, The Hon. G. David Nantes

Minister of Culture, Recreation and Fitness, Minister in charge of administration of the Lottery Act and Minister in charge of administration of the Heritage Property Act, The Hon. William J. MacLean.

#### New Brunswick

Premier, The Hon. Richard Bennett Hatfield

Attorney General and Minister of Justice, The Hon. Fernand Dubé, QC

Minister of Finance and Minister responsible for New Brunswick Housing Corp., The Hon. John B.M. Baxter, QC

Chairman of Treasury Board, The Hon. Harold N. Fanjoy

Minister of Supply and Services, The Hon. Edwin G. Allen

Minister of Transportation, The Hon. Wilfred G. Bishop

Minister of Natural Resources and Minister responsible for Energy Policy, The Hon. Gerald S. Merrithew

Minister of Agriculture and Rural Development, The Hon. Malcolm N. MacLeod

Minister of Health, The Hon. Charles G. Gallagher

Minister of Social Services, The Hon. Nancy E. Clark Teed

Minister of Labour and Manpower, The Hon. Joseph W. Mombourquette

Minister of Education, The Hon. Clarence Cormier

Minister of Continuing Education, The Hon. Mabel M. DeWare

Minister of Municipal Affairs, The Hon. Yvon R. Poitras

Minister of Commerce and Development, The Hon. Paul W. Dawson

Minister of Fisheries, The Hon. Jean Gauvin

Minister of the Environment, The Hon. C.W. (Bill) Harmer

Minister of Tourism, The Hon. Omer Leger

Minister of Youth and Recreation, The Hon. Leslie I. Hull

Minister of Historical and Cultural Resources, The Hon. Jean-Pierre Ouellet

Chairman of Public Services Delivery Reform, The Hon. Jean-Maurice Simard

Chairman of Social Program Reform, The Hon.  
Brenda M. Robertson

Chairman of the New Brunswick Electric Power  
Commission, The Hon. Leland W. McGaw, QC.

### Quebec

Premier and President of the Executive Council, The  
Hon. René Lévesque

Deputy Premier, Minister of Social Affairs and Chairman  
of the Standing Cabinet Committee on Social  
Development, The Hon. Camille Laurin

Minister of Finance and Chairman of the Standing  
Cabinet Committee on Economic Development, The  
Hon. Jacques Parizeau

Government House Leader, Minister responsible for  
Electoral Reform and Chairman of the Legislation  
Committee, The Hon. Marc-André Bédard

President of the Treasury Board and Minister responsible  
for administration, The Hon. Michel Clair

Minister of Education and Chairman of the Standing  
Cabinet Committee on Cultural Development, The Hon.  
Yves Bérubé

Minister of Justice and Minister responsible for Canadian  
Intergovernmental Affairs, The Hon. Pierre-Marc  
Johnson

Minister responsible for Regional Development  
and Chairman of the Standing Cabinet Committee  
on Regional Development, The Hon.  
François Gendron

Minister of International Relations and Minister of  
Foreign Trade, The Hon. Bernard Landry

Minister of Manpower and Income Security and Vice  
President of the Treasury Board, The Hon.  
Pauline Marois

Minister of Energy and Resources, The Hon.  
Yves Duhaime

Minister responsible for Citizen-Government Relations,  
The Hon. Denis Lazure

Minister of Transport, The Hon. Jacques Léonard

Minister of Agriculture, Fisheries and Food, The Hon.  
Jean Garon

Minister of Housing and Consumer Protection, The Hon.  
Guy Tardif

Minister of Cultural Affairs, The Hon. Clément Richard

Minister of Cultural Communities and Immigration, The  
Hon. Gérald Godin

Minister responsible for the Status of Women and  
Chairwoman of the Standing Committee on the Status of  
Women, The Hon. Denise Leblanc-Bantey

Minister of Communications, The Hon.  
Jean-François Bertrand

Minister of Municipal Affairs and Minister of Public  
Works and Supply, The Hon. Alain Marcoux

Minister of Industry, Commerce and Tourism, The Hon.  
Rodrigue Biron

Minister of Labour, The Hon. Raynald Fréchette

Minister of Recreation, Hunting and Fishing, The Hon.  
Guy Chevrete

Minister of the Environment, The Hon. Adrien  
Ouellette

Minister of Science and Technology, The Hon.  
Gilbert Paquette

Minister of Revenue, The Hon. Robert Dean.

### Ontario

Premier and President of the Council, The Hon. William  
Grenville Davis, QC

Deputy Premier, The Hon. Robert Welch, QC

Minister of Intergovernmental Affairs and Government  
House Leader, The Hon. Thomas L. Wells

Minister of Northern Affairs, The Hon. Leo Bernier

Minister of Transportation and Communications, The  
Hon. James W. Snow

Minister of Municipal Affairs and Housing, The Hon.  
Claude Bennett

Minister of Industry and Trade, The Hon. Frank S. Miller

Minister of Agriculture and Food, The Hon. Dennis R.  
Timbrell

Minister of Education and Minister of Colleges and  
Universities, The Hon. Bette Stephenson, M.D.

Attorney General, The Hon. Roy McMurtry, QC

Minister of Health, The Hon. Keith C. Norton, QC

Minister of Community and Social Services, The Hon.  
Frank Drea

Treasurer of Ontario and Minister of Economics, The  
Hon. Larry Grossman, QC

Chairman of Management Board of Cabinet and  
Chairman of Cabinet, The Hon. George McCague

Minister of Tourism and Recreation, The Hon.  
Reuben Baetz

Minister of Consumer and Commercial Relations, The  
Hon. Robert G. Elgie, M.D.

Provincial Secretary for Justice, The Hon. Gordon  
Walker, QC

Minister of Revenue, The Hon. Bud Gregory

Minister of Natural Resources, The Hon. Alan  
W. Pope, QC

Minister of Correctional Services, The Hon.  
Nicholas G. Leluk

Minister of Government Services, The Hon.  
George L. Ashe

Minister of Labour, The Hon. Russell H. Ramsay

Provincial Secretary for Resources Development, The  
Hon. Norman W. Sterling, QC

Solicitor General, The Hon. George W. Taylor, QC

Minister without portfolio, The Hon. Robert G. Eaton

Minister of the Environment, The Hon. Andrew S. Brandt

Minister of Citizenship and Culture, The Hon. Susan Fish

Minister of Energy, The Hon. Philip Andrewes

Provincial Secretary for Social Development, The Hon.  
Gordon H. Dean

Secretary of the Cabinet, The Hon. Edward Stewart.

## Manitoba

Premier, President of the Executive Council and Minister  
of Federal-Provincial Relations, The Hon. Howard  
Russell Pawley, QC

Minister of Health, Minister responsible for Sport, and  
Minister charged with the administration of the Boxing  
and Wrestling Commission Act, The Fitness and  
Amateur Sport Act and the Manitoba Lotteries  
Foundation Act, The Hon. Laurent Louis Desjardins

Minister of Business Development and Tourism and  
Minister responsible for the administration of the  
Manitoba Telephone Act, The Hon. Samuel Uskiw

Minister of Employment Services and Economic  
Security, The Hon. Leonard Salusbury Evans

Minister of Agriculture, The Hon. Billie Uruski

Minister of Government Services, The Hon. A.R.  
(Pete) Adam

Minister of Co-operative Development, The Hon. Jay  
Marine Cowan

Minister of Energy and Mines, Minister responsible for  
the administration of the Manitoba Hydro Act, The Hon.  
Wilson D. Parasiuk

Minister of Finance, Minister of Crown Investments, and  
Minister responsible for the Civil Service Act, the Civil  
Service Superannuation Act, the Civil Service Special  
Supplementary Severance Benefit Act, the Public  
Servants Insurance Act, the Manitoba Development  
Corp. Act (with respect to A.E. McKenzie Co. Ltd.), The  
Hon. Victor Schroeder

Minister of Education, The Hon. Maureen Lucille  
Hemphill

Minister of Culture, Heritage and Recreation, Minister of  
Industry, Trade and Technology, and Minister responsible  
for and charged with the administration of the Manitoba  
Data Services Act, the Manitoba Development Corp. Act  
(except with respect to A.E. McKenzie Co. Ltd.), The  
Hon. Eugene Michael Kostyra

Attorney General, Minister of Consumer and Corporate  
Affairs, Keeper of the Great Seal, Minister responsible for  
administration of the Liquor Control Act, The Hon.  
Roland Penner

Minister of Community Services and Corrections, The  
Hon. Muriel Ann Smith

Minister of Natural Resources, The Hon. Alvin Henry  
Mackling

Minister of Labour, Minister of Urban Affairs and  
Minister responsible for the Status of Women, The Hon.  
Mary Elizabeth Dolin

Minister of Northern Affairs, and Minister responsible for  
and charged with the administration of the Communities  
Economic Development Fund Act, Resources  
Development Act (with respect to the Channel Area  
Loggers Ltd. or to Moose Lake Loggers Ltd.) and  
Manitoba Forestry Resources Ltd., The Hon. Jerry  
Thomas Storie

Minister of Highways and Transportation, The Hon.  
John S. Plohman

Minister of Housing and Minister charged with the  
administration of the Manitoba Public Insurance Corp.  
Act, The Hon. John Bucklaschuk

Minister of Municipal Affairs, The Hon. Andrué Anstett

Minister of Environment and Workplace Safety and  
Health, The Hon. Gerald Lecuyer.

## Saskatchewan

Premier and President of the Executive Council, The  
Hon. D. Grant Devine

Minister of Economic Development and Trade, and  
Provincial Secretary, The Hon. E. Bernstein

Minister of Finance, The Hon. R.L. Andrew

Attorney General and Minister of Justice, The Hon.  
J.G. Lane

Minister of Revenue and Financial Services, The Hon.  
P. Rousseau

Minister of Health, The Hon. D.G. Taylor

Minister of Consumer and Commercial Affairs, The Hon.  
J.H. Duncan

Minister of the Environment, The Hon. N.H. Hardy

Minister of Supply and Services, The Hon. G.M. McLeod

Minister of Education, The Hon. P.A. Smith

Minister of Parks and Renewable Resources, The Hon.  
R.H. Pickering

Minister of Highways and Transportation, The Hon.  
J.A. Garner

Minister of Labour, The Hon. L.A. McLaren

Minister of Science and Technology and Minister of  
Telephones, The Hon. G. Currie

Minister of Co-operation and Co-operative Development,  
The Hon. J.S. Sandburg

Minister of Energy and Mines, The Hon. P.J. Schoenhals

Minister of Social Services, The Hon. G.E. Dirks

Minister of Rural Development, The Hon. L.A. Domotor

Minister without portfolio, The Hon. S.P. Dutchak

Minister of Urban Affairs, The Hon. T.B. Embury

Minister of Culture and Recreation, The Hon.  
R.D.B. Folk

Minister of Agriculture, The Hon. L.H. Hepworth

Minister of Tourism and Small Business, The Hon.  
J.C. Klein

Minister of Advanced Education and Manpower, The  
Hon. C. Maxwell

Minister without portfolio, The Hon. G.S. Muirhead.

### **Alberta**

Premier and President of the Executive Council, The  
Hon. E. Peter Lougheed

Provincial Treasurer, The Hon. Louis D. Hyndman

Minister of Energy and Natural Resources, The Hon.  
John Zoazirny

Attorney General and Government House Leader, The  
Hon. Neil S. Crawford

Minister of Hospitals and Medical Care, The Hon. David  
J. Russell

Minister of Municipal Affairs, The Hon. Julian G.J.  
Koziak

Minister of Agriculture, The Hon. E. Le Roy Fjordbotten

Minister of Advanced Education, The Hon. Dick  
Johnston

Minister of Labour, The Hon. Leslie G. Young

Minister of Education, The Hon. David King

Minister of Federal and Intergovernmental Affairs and  
Deputy Government House Leader, The Hon. James D.  
Horsman

Minister of Consumer and Corporate Affairs, The Hon.  
Connie Osterman

Minister of Social Services and Community Health, The  
Hon. Dr. P. Neil Webber

Solicitor General, The Hon. Dr. Ian Reid

Minister of Housing, The Hon. Larry Shaben

Minister of Environment, The Hon. Fred Bradley

Minister of Economic Development, The Hon. Hugh  
Planche

Minister of Transportation, The Hon. Marvin E. Moore

Minister of Utilities and Telephones, The Hon.  
Robert J. Bogle

Minister of Tourism and Small Business, The Hon.  
J. Allen Adair

Minister of Recreation and Parks, The Hon. Peter  
Trynchy

Minister of International Trade, The Hon.  
Horst A. Schmid

Associate Minister of Public Lands and Wildlife, The  
Hon. Donald Sparrow

Minister responsible for Native Affairs, The Hon.  
Milt Pahl

Minister of Culture, The Hon. Mary LeMessurier

Minister responsible for Workers' Health, Safety and  
Compensation, The Hon. Bill W. Diachuk

Minister responsible for Personnel Administration, The  
Hon. Greg Stevens

Minister of Manpower, The Hon. Ernie Isley

Minister of Public Works, Supply and Services, The Hon.  
Thomas W. Chambers.

### **British Columbia**

Premier, President of the Council, The Hon. William  
Richards Bennett

Minister of Human Resources, The Hon. Grace M.  
McCarthy

Provincial Secretary and Minister of Government  
Services, The Hon. James Roland Chabot

Attorney General, The Hon. Brian R.D. Smith, QC

Minister of Finance, The Hon. Hugh Austin Curtis

Minister of Agriculture and Food, The Hon. Harvey  
W. Schroeder

Minister of Education, The Hon. John Herbert Heinrich

Minister of Labour, The Hon. Robert Howard  
McClelland

Minister of Municipal Affairs, The Hon. William  
S. Ritchie

Minister of Transportation and Highways, The Hon.  
Alexander V. Fraser

Minister of Energy, Mines and Petroleum Resources, The  
Hon. C. Stephen Rogers

Minister of Health, The Hon. James A. Nielsen

Minister of Industry and Small Business Development,  
The Hon. Donald McGray Phillips

Minister of Forests, The Hon. Thomas M. Waterland

Minister of Lands, Parks and Housing and Minister of  
Environment, The Hon. Anthony J. Brummet

Minister of Consumer and Corporate Affairs, The Hon. James J. Hewitt

Minister of Universities, Science and Communications, The Hon. Patrick Lucey McGeer

Minister of Intergovernmental Relations, The Hon. Garde Basil Gardom

Minister of Tourism, The Hon. Claude Harry Richmond.

#### Yukon

Government Leader, Executive Council Office, Minister of Finance and Minister responsible for the Public Service Commission, The Hon. Chris Pearson

Minister of Economic Development and Minister of Municipal and Community Affairs, The Hon. Dan Lang

Minister of Consumer and Corporate Affairs, Minister of Highways and Transportation and Minister of Renewable Resources, The Hon. Howard Tracey

Minister of Education, Advanced Education and Manpower and Minister of Tourism, Recreation and Cultural Resources, The Hon. Bea Firth

Minister of Justice, Minister responsible for the Workers' Compensation Board and Minister Responsible for the Yukon Housing Corporation and the Yukon Liquor Corporation, The Hon. Clarke Ashley

Minister of Government Services and Minister of Health and Human Resources, The Hon. Andy Philipsen.

#### Northwest Territories

Commissioner, J.H. Parker

Elected executive committee members: Richard Nerysoo (Government Leader), Tom Butters, Nellie Cournoyea, Tagak Curley, Bruce McLaughlin, Dennis Patterson, Nick Sibbeston, Gordon Wray

Members of the Legislative Assembly: Michael Angottitauruq, Moses Appaq, Joe Arlooktoo, Michael Ballantyne, Samuel Gagan, Eliza Lawrence, Robert MacQuarrie, Arnold McCallum, Pauloosie Paniloo, Red Pedersen, Ludy Pudluk, Lynda Sorensen, Donald Stewart (Speaker), John T'Seleie, James Wah-Shee (Deputy Speaker)

Clerk, David Hamilton

Legal Adviser, Peter Fuglsang.



## APPENDIX 9

# COMMISSIONS OF INQUIRY

### Federal commissions

Royal commissions under Part I of the Inquiries Act, established up to May 1980, are described in previous editions of the *Canada Year Book* beginning with the 1940 edition. The following list presents the federal commissions established between May 1980 and March 1984, the name of the chief commissioner or chairman, and the date each was established.

Monitoring of matters concerning the petroleum and gas industry in Canada, Harold A. Renouf, August 1, 1980

The conditions of the foreign service of Canada, Pamela A. McDougall, August 27, 1980

The present conditions in the newspaper industry in Canada; the takeovers and concentrations of ownership, Thomas W. Kent, September 3, 1980

The fisheries of the Pacific Coast of Canada; conditions, management and utilization, Peter Pearse, January 12, 1981

Foreign claims commission (re-established), Thos. D. MacDonald, May 28, 1981

Royal commission on the Ocean Ranger marine disaster, Hon. Mr. Justice T. Alex Hickman (and five commissioners), March 17, 1982

Royal commission on the economic union and development prospects for Canada, Hon. Donald S. Macdonald, November 5, 1982

Commission of inquiry on equality in employment, Judge Rosalie S. Abella, June 24, 1983

Indian commission of Ontario (re-established), Mr. Justice E. Patrick Hartt, September 30, 1983.

### Provincial and territorial commissions

The following list presents commissions of inquiry and provincial and territorial commissions established between May 1980 and March 1984, the name of the chief commissioner or chairman, and the date each was established.

#### Newfoundland

Commission of inquiry into all matters relating to the Marystown Shipyard Ltd., Robert J. Olivero, July 3, 1980

Commission of inquiry into matters relating to the inshore fishery of the province, Brose V. Paddock, August 20, 1980

Commission of inquiry to report on the social and economic conditions pertaining to the people and committees of the Connaigre Peninsula with particular reference to the catching, selling and processing of inshore fish landings in that area, Graham Mercer, February 11, 1981

Federal-provincial inquiry into the loss of life resulting from the sinking of the Ocean Ranger on February 15, 1982, Hon. T. Alex Hickman, Chief Justice of the Trial Division, Supreme Court of Newfoundland; vice-chairman, Hon. Gordon A. Winter, QC, LL.D., March 12, 1982

Commission of inquiry into escalating health care costs and methods of financing such costs, David Orsborn, April 15, 1983.

#### Prince Edward Island

Commission of inquiry into the costs of electric power to the residents of Prince Edward Island, Melvin J. McQuaid, December 10, 1981.

#### Nova Scotia

Commission to review the Police Act, Judge Nathan Green, March 29, 1980

Commission on public education finance, George Walker, August 1, 1980

Nova Scotia provincial electoral commission, Judge William C. Atton, January 8, 1981

Commission respecting laws relating to conflicts of interests of members of the House of Assembly, Hon. Allen E. Sullivan, March 10, 1981

Royal Commission on pensions, Charles Vaughn, August 11, 1981

Commission of inquiry on remuneration of elected provincial officials, Dr. W. Andrew MacKay, December 22, 1981

Commission of inquiry into uranium mining in Nova Scotia, Judge Robert J. McCleave, February 9, 1982

Commission on the forest resources of the province of Nova Scotia, Chief Judge Nathan Green, May 6, 1982

Commission of inquiry on rents, Mr. Justice Thomas H. Coffin, November 9, 1982

Commission of inquiry on representation on the metropolitan authority of Halifax, Dartmouth, and the municipality of the county of Halifax, I.W. Ackerley, January 25, 1983

Commission of inquiry on postsecondary education, Rod J. MacLennan, February 10, 1983

Commission of inquiry into the labour-management dispute between Scott Maritimes Ltd. and the Canadian Paperworkers Union, Judge Alan Gold, April 28, 1983

Commission of inquiry into ex gratia compensation to Donald Marshall Jr., Mr. Justice Alexander Bradshaw Campbell, March 13, 1984.

#### **New Brunswick**

Saint John provincial jail disturbance, His Honour J. Frederic Arseneault, February 19, 1981.

#### **Quebec**

Commission of inquiry into the Belmoral Mine tragedy and safety conditions in underground mines, Mr. Justice René Beaudry, July 9, 1980

Commission to study access to government information and personal information that the government has about individual citizens, Jean Paré, September 3, 1980

Commission to study the movie and audiovisual industry in Quebec, Guy Fournier, January 21, 1981

Commission of inquiry into the appropriateness of establishing a supernumerary employees plan for the Montréal Urban Community Transit Commission, Germain Jutras, March 10, 1982

Commission of inquiry into health and safety conditions in the establishments of "Les produits chimiques Expro Inc.," Mr. Justice René Beaudry, March 2, 1983

Commission of inquiry into Madelipêche Inc. and Pêcheurs Unis du Québec, Mr. Justice André Marceau, June 22, 1983

Commission to study the Outaouais Region, Marcel Robidas, February 29, 1984.

#### **Ontario**

Royal commission on asbestos, Dr. J. Stefan Dupre, April 29, 1980

Public inquiry into high rise fires, Judge John B. Webber, June 30, 1982

Residential tenancies commission, Stuart Thom, November 26, 1982

Royal commission of inquiry into certain deaths at the hospital for sick children, Hon. Mr. Justice S.G.M. Grange, April 21, 1983.

#### **Manitoba**

Surface rights inquiry, R.A.L. Nugent, QC, December 10, 1980

The compulsory retirement inquiry, Marshall E. Rothstein, March 11, 1981

Workers compensation board inquiry, Hon. Israel Nitikman, November 4, 1981

Commission of inquiry into indemnities, allowances, pensions, etc., for City of Winnipeg Council, Mayor and Deputy Mayor, Mr. Justice Gordon Clarke Hall, December 16, 1981

Commission of inquiry into expropriations in the vicinity of Logan and Henry Avenues, and Salter Street Bridge, Evelyn Shapiro, December 16, 1981

The private operators in lotteries inquiry, Judge Gerald O. Jewers, March 17, 1982

The treaty land entitlement commission, Leon Mitchell, September 15, 1982.

#### **Saskatchewan**

Library automation systems of Saskatchewan, Allan Johnson, August 12, 1980

Committee to review library legislation, Merry Harbottle, May 26, 1981

The Culliton Commission, Edward M. Culliton, April 22, 1982

The local government finance commission, Raymond Edward Clayton, May 23, 1982

The Crown investment review commission, W. Wolff, June 9, 1982

The Culliton Inquiry, Edward M. Culliton, July 12, 1982.

#### **Alberta**

To inquire into and report on whether any confidential information in the possession of the government of Alberta in connection with the annexation of certain lands to the city of Edmonton or in connection with the proposed land assembly by the government of Alberta within the area to be annexed was improperly made known to any person, or whether any former member of executive council made representations affecting the said annexation and land assembly decisions, Mr. Justice William R. Brennan, July 9, 1981.

#### **Yukon**

Municipal ordinance, Merve Miller, September 1981

Municipal inquiry board, Merve Miller, October 1981.

#### **Northwest Territories**

Special committee on education, Tagak Curley and Bruce McLaughlin, February 1980

Sub-committee on the impact of division, George Braden and Nellie Cournoyea, November 1980

Special committee on constitutional development, Nick Sibbeston

Electoral district boundaries commission, Mr. Justice Joseph Henry Potts.

## APPENDIX 10

# CONSTITUTION

### Proclamation

*The Constitution Act, 1982, was proclaimed in force April 17, 1982. The following text of the proclamation is reprinted from Canada Gazette Part II, Vol. 116, No. 9, May 12, 1982:*

Elizabeth R

Jean Chrétien

*Attorney General of Canada*

**Elizabeth the Second**, by the Grace of God of the United Kingdom, Canada and Her other Realms and Territories **Queen**, Head of the Commonwealth, Defender of the Faith.

To All to Whom these Presents shall come or whom the same may in anyway concern,

*Greeting:*

### A Proclamation

Whereas in the past certain amendments to the Constitution of Canada have been made by the Parliament of the United Kingdom at the request and with the consent of Canada;

And Whereas it is in accord with the status of Canada as an independent state that Canadians be able to amend their Constitution in Canada in all respects;

And Whereas it is desirable to provide in the Constitution of Canada for the recognition of certain fundamental rights and freedoms and to make other amendments to the Constitution;

And Whereas the Parliament of the United Kingdom has, at the request and with the consent of Canada, enacted the Canada Act, which provides for the patriation and amendment of the Constitution of Canada;

And Whereas section 58 of the Constitution Act, 1982, set out in Schedule B to the Canada Act, provides that the Constitution Act, 1982 shall, subject to section 59 thereof, come into force on a day to be fixed by proclamation issued under the Great Seal of Canada.

Now Know You that We, by and with the advice of Our Privy Council for Canada, do by this Our Proclamation, declare that the Constitution Act, 1982 shall, subject to section 59 thereof, come into force on the seventeenth day of April in the Year of Our Lord One Thousand Nine Hundred and Eighty-two.

Of All Which Our Loving Subjects and all others whom these Presents may concern are hereby required to take notice and to govern themselves accordingly.

In Testimony Whereof We have caused these Our Letters to be made Patent and the Great Seal of Canada to be hereunto affixed.

At Our City of Ottawa, this seventeenth day of April in the Year of Our Lord One Thousand Nine Hundred and Eighty-two and in the Thirty-first Year of Our Reign.

By Her Majesty's Command

**André Ouellet**

*Registrar General of Canada*

**Pierre Trudeau**

*Prime Minister of Canada*

### GOD SAVE THE QUEEN

### Canada Act 1982

*The Canada Act 1982 (U.K.) 1982, c.11, came into force April 17, 1982. The Canada Act 1982 other than Schedule A (French version of Constitution Act 1982) and Schedule B (English version) thereto, reads as follows:*

An Act to give effect to a request by the Senate and House of Commons of Canada

Whereas Canada has requested and consented to the enactment of an Act of the Parliament of the United Kingdom to give effect to the provisions hereinafter set forth and the Senate and the House of Commons of Canada in Parliament assembled have submitted an address to Her Majesty requesting that Her Majesty may graciously be pleased to cause a Bill to be laid before the Parliament of the United Kingdom for that purpose.

Be it therefore enacted by the Queen's Most Excellent Majesty, by and with the advice and consent of the Lords Spiritual and Temporal, and Commons, in this present Parliament assembled, and by the authority of the same, as follows:

1. The Constitution Act, 1982 set out in Schedule B to this Act is hereby enacted for and shall have the force of law in Canada and shall come into force as provided in that Act.
2. No Act of the Parliament of the United Kingdom passed after the Constitution Act, 1982 comes into force shall extend to Canada as part of its law.
3. So far as it is not contained in Schedule B, the French version of this Act is set out in Schedule A to this Act and has the same authority in Canada as the English version thereof.
4. This Act may be cited as the Canada Act 1982.

## Constitution Act, 1982

*The Constitution Act, 1982 was enacted as Schedule B to the Canada Act 1982. The following text is extracted from A consolidation of the Constitution Acts 1867 to 1982, Department of Justice Canada, consolidated as of April 17, 1982. The Constitution Act 1982 came into effect on that date with the exception of paragraph 23(1)(a) in respect of Quebec. The schedule to the Constitution Act, 1982, referred to in Part VII contains repeals of certain earlier constitutional enactments and provides for the renaming of others, as part of the modernization of the constitution. (The schedule is not reprinted here.)*

### Part I Canadian Charter of Rights and Freedoms

Whereas Canada is founded upon principles that recognize the supremacy of God and the rule of law:

#### *Guarantee of Rights and Freedoms*

1. The *Canadian Charter of Rights and Freedoms* guarantees the rights and freedoms set out in it subject only to such reasonable limits prescribed by law as can be demonstrably justified in a free and democratic society.

#### *Fundamental Freedoms*

2. Everyone has the following fundamental freedoms:
  - (a) freedom of conscience and religion;
  - (b) freedom of thought, belief, opinion and expression, including freedom of the press and other media of communication;
  - (c) freedom of peaceful assembly; and
  - (d) freedom of association.

#### *Democratic Rights*

3. Every citizen of Canada has the right to vote in an election of members of the House of Commons or of a

legislative assembly and to be qualified for membership therein.

4. (1) No House of Commons and no legislative assembly shall continue for longer than five years from the date fixed for the return of the writs of a general election of its members.

(2) In time of real or apprehended war, invasion or insurrection, a House of Commons may be continued by Parliament and a legislative assembly may be continued by the legislature beyond five years if such continuation is not opposed by the votes of more than one-third of the members of the House of Commons or the legislative assembly, as the case may be.

5. There shall be a sitting of Parliament and of each legislature at least once every twelve months.

#### *Mobility Rights*

6. (1) Every citizen of Canada has the right to enter, remain in and leave Canada.

(2) Every citizen of Canada and every person who has the status of a permanent resident of Canada has the right

- (a) to move to and take up residence in any province; and
- (b) to pursue the gaining of a livelihood in any province.

(3) The rights specified in subsection (2) are subject to

- (a) any laws or practices of general application in force in a province other than those that discriminate among persons primarily on the basis of province of present or previous residence; and
- (b) any laws providing for reasonable residency requirements as a qualification for the receipt of publicly provided social services.

(4) Subsections (2) and (3) do not preclude any law, program or activity that has as its object the amelioration in a province of conditions of individuals in that province who are socially or economically disadvantaged if the rate of employment in that province is below the rate of employment in Canada.

#### *Legal Rights*

7. Everyone has the right to life, liberty and security of the person and the right not to be deprived thereof except in accordance with the principles of fundamental justice.

8. Everyone has the right to be secure against unreasonable search or seizure.

9. Everyone has the right not to be arbitrarily detained or imprisoned.

10. Everyone has the right on arrest or detention

- (a) to be informed promptly of the reasons therefor;
- (b) to retain and instruct counsel without delay and to be informed of that right; and
- (c) to have the validity of the detention determined by way of *habeas corpus* and to be released if the detention is not lawful.

11. Any person charged with an offence has the right

- (a) to be informed without unreasonable delay of the specific offence;

(b) to be tried within a reasonable time;  
 (c) not to be compelled to be a witness in proceedings against that person in respect of the offence;  
 (d) to be presumed innocent until proven guilty according to law in a fair and public hearing by an independent and impartial tribunal;  
 (e) not to be denied reasonable bail without just cause;  
 (f) except in the case of an offence under military law tried before a military tribunal, to the benefit of trial by jury where the maximum punishment for the offence is imprisonment for five years or a more severe punishment;  
 (g) not to be found guilty on account of any act or omission unless, at the time of the act or omission, it constituted an offence under Canadian or international law or was criminal according to the general principles of law recognized by the community of nations;  
 (h) if finally acquitted of the offence, not to be tried for it again and, if finally found guilty and punished for the offence, not to be tried or punished for it again; and  
 (i) if found guilty of the offence and if the punishment for the offence has been varied between the time of commission and the time of sentencing, to the benefit of the lesser punishment.

**12.** Everyone has the right not to be subjected to any cruel and unusual treatment or punishment.

**13.** A witness who testifies in any proceedings has the right not to have any incriminating evidence so given used to incriminate that witness in any other proceedings, except in a prosecution for perjury or for the giving of contradictory evidence.

**14.** A party or witness in any proceedings who does not understand or speak the language in which the proceedings are conducted or who is deaf has the right to the assistance of an interpreter.

### *Equality Rights*

**15. (1)** Every individual is equal before and under the law and has the right to the equal protection and equal benefit of the law without discrimination and, in particular, without discrimination based on race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

(2) Subsection (1) does not preclude any law, program or activity that has as its object the amelioration of conditions of disadvantaged individuals or groups including those that are disadvantaged because of race, national or ethnic origin, colour, religion, sex, age or mental or physical disability.

### *Official Languages of Canada*

**16. (1)** English and French are the official languages of Canada and have equality of status and equal rights and privileges as to their use in all institutions of the Parliament and government of Canada.

(2) English and French are the official languages of New Brunswick and have equality of status and equal rights and privileges as to their use in all institutions of the legislature and government of New Brunswick.

(3) Nothing in this Charter limits the authority of Parliament or a legislature to advance the equality of status or use of English and French.

**17. (1)** Everyone has the right to use English or French in any debates and other proceedings of Parliament.

(2) Everyone has the right to use English or French in any debates and other proceedings of the legislature of New Brunswick.

**18. (1)** The statutes, records and journals of Parliament shall be printed and published in English and French and both language versions are equally authoritative.

(2) The statutes, records and journals of the legislature of New Brunswick shall be printed and published in English and French and both language versions are equally authoritative.

**19. (1)** Either English or French may be used by any person in, or in any pleading in or process issuing from, any court established by Parliament.

(2) Either English or French may be used by any person in, or in any pleading in or process issuing from, any court of New Brunswick.

**20. (1)** Any member of the public in Canada has the right to communicate with, and to receive available services from, any head or central office of an institution of the Parliament or government of Canada in English or French, and has the same right with respect to any other office of any such institution where

(a) there is a significant demand for communications with and services from that office in such language; or

(b) due to the nature of the office, it is reasonable that communications with and services from that office be available in both English and French.

(2) Any member of the public in New Brunswick has the right to communicate with, and to receive available services from, any office of an institution of the legislature or government of New Brunswick in English or French.

**21.** Nothing in sections 16 to 20 abrogates or derogates from any right, privilege or obligation with respect to the English and French languages, or either of them, that exists or is continued by virtue of any other provision of the Constitution of Canada.

**22.** Nothing in sections 16 to 20 abrogates or derogates from any legal or customary right or privilege acquired or enjoyed either before or after the coming into force of this Charter with respect to any language that is not English or French.

### *Minority Language Educational Rights*

**23. (1)** Citizens of Canada

(a) whose first language learned and still understood is that of the English or French linguistic minority population of the province in which they reside, or

(b) who have received their primary school instruction in Canada in English or French and reside in a province where the language in which they received that instruction is the language of the English or French linguistic minority population of the province, have the right to have their children receive primary and secondary school instruction in that language in that province.

(2) Citizens of Canada of whom any child has received or is receiving primary or secondary school instruction in English

or French in Canada, have the right to have all their children receive primary and secondary school instruction in the same language.

(3) The right of citizens of Canada under subsections (1) and (2) to have their children receive primary and secondary school instruction in the language of the English or French linguistic minority population of a province (a) applies wherever in the province the number of children of citizens who have such a right is sufficient to warrant the provision to them out of public funds of minority language instruction; and (b) includes, where the number of those children so warrants, the right to have them receive that instruction in minority language educational facilities provided out of public funds.

#### *Enforcement*

24. (1) Anyone whose rights or freedoms, as guaranteed by this Charter, have been infringed or denied may apply to a court of competent jurisdiction to obtain such remedy as the court considers appropriate and just in the circumstances.

(2) Where, in proceedings under subsection (1), a court concludes that evidence was obtained in a manner that infringed or denied any rights or freedoms guaranteed by this Charter, the evidence shall be excluded if it is established that, having regard to all the circumstances, the admission of it in the proceedings would bring the administration of justice into disrepute.

#### *General*

25. The guarantee of this Charter of certain rights and freedoms shall not be construed so as to abrogate or derogate from any aboriginal, treaty or other rights or freedoms that pertain to the aboriginal peoples of Canada including

(a) any rights or freedoms that have been recognized by the Royal Proclamation of October 7, 1763; and (b) any rights or freedoms that may be acquired by the aboriginal peoples of Canada by way of land claims settlement.

26. The guarantee in this Charter of certain rights and freedoms shall not be construed as denying the existence of any other rights or freedoms that exist in Canada.

27. This Charter shall be interpreted in a manner consistent with the preservation and enhancement of the multicultural heritage of Canadians.

28. Notwithstanding anything in this Charter, the rights and freedoms referred to in it are guaranteed equally to male and female persons.

29. Nothing in this Charter abrogates or derogates from any rights or privileges guaranteed by or under the Constitution of Canada in respect of denominational, separate or dissentient schools.

30. A reference in this Charter to a Province or to the legislative assembly or legislature of a province shall be deemed to include a reference to the Yukon Territory and the Northwest Territories, or to the appropriate legislative authority thereof, as the case may be.

31. Nothing in this Charter extends the legislative powers of any body or authority.

#### *Application of Charter*

32. (1) This Charter applies

(a) to the Parliament and government of Canada in respect of all matters within the authority of Parliament including all matters relating to the Yukon Territory and Northwest Territories; and

(b) to the legislature and government of each province in respect of all matters within the authority of the legislature of each province.

(2) Notwithstanding subsection (1), section 15 shall not have effect until three years after this section comes into force.

33. (1) Parliament or the legislature of a province may expressly declare in an Act of Parliament or of the legislature, as the case may be, that the Act or a provision thereof shall operate notwithstanding a provision included in section 2 or sections 7 to 15 of this Charter.

(2) An Act or a provision of an Act in respect of which a declaration made under this section is in effect shall have such operation as it would have but for the provision of this Charter referred to in the declaration.

(3) A declaration made under subsection (1) shall cease to have effect five years after it comes into force or on such earlier date as may be specified in the declaration.

(4) Parliament or the legislature of a province may re-enact a declaration made under subsection (1).

(5) Subsection (3) applies in respect of a re-enactment made under subsection (4).

#### *Citation*

34. This Part may be cited as the *Canadian Charter of Rights and Freedoms*.

### **Part II Rights of the Aboriginal Peoples of Canada**

35. (1) The existing aboriginal and treaty rights of the aboriginal peoples of Canada are hereby recognized and affirmed.

(2) In this Act, "aboriginal peoples of Canada" includes the Indian, Inuit and Métis peoples of Canada.

### **Part III Equalization and Regional Disparities**

36. (1) Without altering the legislative authority of Parliament or of the provincial legislatures, or the rights of any of them with respect to the exercise of their legislative authority, Parliament and the legislatures, together with the government of Canada and the provincial governments, are committed to

(a) promoting equal opportunities for the well-being of Canadians;

(b) furthering economic development to reduce disparity in opportunities; and  
(c) providing essential public services of reasonable quality to all Canadians.

(2) Parliament and the government of Canada are committed to the principle of making equalization payments to ensure that provincial governments have sufficient revenues to provide reasonably comparable levels of public services at reasonably comparable levels of taxation.

#### Part IV Constitutional Conference

37. (1) A constitutional conference composed of the Prime Minister of Canada and the first ministers of the provinces shall be convened by the Prime Minister of Canada within one year after this Part comes into force.

(2) The conference convened under subsection (1) shall have included in its agenda an item respecting constitutional matters that directly affect the aboriginal peoples of Canada, including the identification and definition of the rights of those peoples to be included in the Constitution of Canada and the Prime Minister of Canada shall invite representatives of those peoples to participate in the discussions on that item.

(3) The Prime Minister of Canada shall invite elected representatives of the governments of the Yukon Territory and the Northwest Territories to participate in the discussions on any item on the agenda of the conference convened under subsection (1) that, in the opinion of the Prime Minister, directly affects the Yukon Territory and the Northwest Territories.

#### Part V Procedure for Amending Constitution of Canada

38. (1) An amendment to the Constitution of Canada may be made by proclamation issued by the Governor General under the Great Seal of Canada where so authorized by  
(a) resolutions of the Senate and House of Commons; and  
(b) resolutions of the legislative assemblies of at least two-thirds of the provinces that have, in the aggregate, according to the then latest general census, at least fifty per cent of the population of all the provinces.

(2) An amendment made under subsection (1) that derogates from the legislative powers, the proprietary rights or any other rights or privileges of the legislature or government or a province shall require a resolution supported by a majority of the members of each of the Senate, the House of Commons and the legislative assemblies required under subsection (1).

(3) An amendment referred to in subsection (2) shall not have effect in a province the legislative assembly of which has expressed its dissent thereto by resolution supported by a majority of its members prior to the issue of the proclamation to which the amendment relates unless that legislative assembly, subsequently, by resolution supported by a majority of its members, revokes its dissent and authorizes the amendment.

(4) A resolution of dissent made for the purposes of subsection (3) may be revoked at any time before or after the issue of the proclamation to which it relates.

39. (1) A proclamation shall not be issued under subsection 38(1) before the expiration of one year from the adoption of the resolution initiating the amendment procedure thereunder, unless the legislative assembly of each province has previously adopted a resolution of assent or dissent.

(2) A proclamation shall not be issued under subsection 38(1) after the expiration of three years from the adoption of the resolution initiating the amendment procedure thereunder.

40. Where an amendment is made under subsection 38(1) that transfers provincial legislative powers relating to education or other cultural matters from provincial legislatures to Parliament, Canada shall provide reasonable compensation to any province to which the amendment does not apply.

41. An amendment to the Constitution of Canada in relation to the following matters may be made by proclamation issued by the Governor General under the Great Seal of Canada only where authorized by resolutions of the Senate and House of Commons and of the legislative assembly of each province:

- (a) the office of the Queen, the Governor General and the Lieutenant Governor of a province;
- (b) the right of a province to a number of members in the House of Commons not less than the number of Senators by which the province is entitled to be represented at the time this Part comes into force;
- (c) subject to section 43, the use of the English or the French language;
- (d) the composition of the Supreme Court of Canada; and
- (e) an amendment to this Part.

42. (1) An amendment to the Constitution of Canada in relation to the following matters may be made only in accordance with subsection 38(1):

- (a) the principle of proportionate representation of the provinces in the House of Commons prescribed by the Constitution of Canada;
- (b) the powers of the Senate and the method of selecting Senators;
- (c) the number of members by which a province is entitled to be represented in the Senate and the residence qualifications of Senators;
- (d) subject to paragraph 41(d), the Supreme Court of Canada;
- (e) the extension of existing provinces into the territories; and
- (f) notwithstanding any other law or practice, the establishment of new provinces.

(2) Subsections 38(2) to (4) do not apply in respect of amendments in relation to matters referred to in subsection (1).

43. An amendment to the Constitution of Canada in relation to any provision that applies to one or more, but not all, provinces, including

(a) any alteration to boundaries between provinces, and  
(b) any amendment to any provision that relates to the use of the English or the French language within a province, may be made by proclamation issued by the Governor General under the Great Seal of Canada only where so authorized by resolutions of the Senate and House of Commons and of the legislative assembly of each province to which the amendment applies.

44. Subject to sections 41 and 42, Parliament may exclusively make laws amending the Constitution of Canada in relation to the executive government of Canada or the Senate and House of Commons.

45. Subject to section 41, the legislature of each province may exclusively make laws amending the Constitution of the province.

46. (1) The procedures for amendment under sections 38, 41, 42 and 43 may be initiated either by the Senate or the House of Commons or by the legislative assembly of a province.

(2) A resolution of assent made for the purposes of this Part may be revoked at any time before the issue of a proclamation authorized by it.

47. (1) An amendment to the Constitution of Canada made by proclamation under section 38, 41, 42 or 43 may be made without a resolution of the Senate authorizing the issue of the proclamation if, within one hundred and eighty days after the adoption by the House of Commons of a resolution authorizing its issue, the Senate has not adopted such a resolution and if, at any time after the expiration of that period, the House of Commons again adopts the resolution.

(2) Any period when Parliament is prorogued or dissolved shall not be counted in computing the one hundred and eighty day period referred to in subsection (1).

48. The Queen's Privy Council for Canada shall advise the Governor General to issue a proclamation under this Part forthwith on the adoption of the resolutions required for an amendment made by proclamation under this Part.

49. A constitutional conference composed of the Prime Minister of Canada and the first ministers of the provinces shall be convened by the Prime Minister of Canada within fifteen years after this Part comes into force to review the provisions of this Part.

## Part VI Amendment to the Constitution Act, 1867

50. The *Constitution Act, 1867* (formerly named the *British North America Act, 1867*) is amended by adding thereto, immediately after section 92 thereof, the following heading and section:

*Non-Renewable Natural Resources, Forestry Resources and Electrical Energy*

92A. (1) In each province, the legislature may exclusively make laws in relation to

(a) exploration for non-renewable natural resources in the province;

(b) development, conservation and management of non-renewable natural resources and forestry resources in the province, including laws in relation to the rate of primary production therefrom; and

(c) development, conservation and management of sites and facilities in the province for the generation and production of electrical energy.

(2) In each province, the legislature may make laws in relation to the export from the province to another part of Canada of the primary production from non-renewable natural resources and forestry resources in the province and the production from facilities in the province for the generation of electrical energy, but such laws may not authorize or provide for discrimination in prices or in supplies exported to another part of Canada.

(3) Nothing in subsection (2) derogates from the authority of Parliament to enact laws in relation to matters referred to in that subsection and, where such a law of Parliament and a law of a province conflict, the law of Parliament prevails to the extent of the conflict.

(4) In each province, the legislature may make laws in relation to the raising of money by any mode or system of taxation in respect of

(a) non-renewable natural resources and forestry resources in the province and the primary production therefrom, and  
(b) sites and facilities in the province for the generation of electrical energy and the production therefrom, whether or not such production is exported in whole or in part from the province, but such laws may not authorize or provide for taxation that differentiates between production exported to another part of Canada and production not exported from the province.

(5) The expression "primary production" has the meaning assigned by the Sixth Schedule.

(6) Nothing in subsections (1) to (5) derogates from any powers or rights that a legislature or government of a province had immediately before the coming into force of this section.

51. The said Act is further amended by adding thereto the following Schedule:

### THE SIXTH SCHEDULE *Primary Production from Non-Renewable Natural Resources and Forestry Resources*

1. For the purposes of section 92A of this Act,

(a) production from a non-renewable natural resource is primary production therefrom if

(i) it is in the form in which it exists upon its recovery or severance from its natural state, or

(ii) it is a product resulting from processing or refining the resource, and is not a manufactured product or a product resulting from refining crude oil, refining upgraded heavy crude oil, refining gases or liquids derived from coal or refining a synthetic equivalent of crude oil; and

(b) production from a forestry resource is primary production therefrom if it consists of sawlogs, poles, lumber, wood chips, sawdust or any other primary wood

product, or wood pulp, and is not a product manufactured from wood.

## Part VII General

52. (1) The Constitution of Canada is the supreme law of Canada, and any law that is inconsistent with the provisions of the Constitution is, to the extent of the inconsistency of no force or effect.

(2) The Constitution of Canada includes

- (a) the *Canada Act 1982*, including this Act;
- (b) the Acts and orders referred to in the schedule; and
- (c) any amendment to any Act or order referred to in paragraph (a) or (b).

(3) Amendments to the Constitution of Canada shall be made only in accordance with the authority contained in the Constitution of Canada.

53. (1) The enactments referred to in Column I of the schedule are hereby repealed or amended to the extent indicated in Column II thereof and, unless repealed, shall continue as law in Canada under the names set out in Column III thereof.

(2) Every enactment, except the *Canada Act 1982*, that refers to an enactment referred to in the schedule by the name in Column I thereof is hereby amended by substituting for that name the corresponding name in Column III thereof, and any British North America Act not referred to in the schedule may be cited as the *Constitution Act* followed by the year and number, if any, of its enactment.

54. Part IV is repealed on the day that is one year after this Part comes into force and this section may be repealed and this act renumbered, consequentially upon the repeal of Part IV and this section, by proclamation issued by the Governor General under the Great Seal of Canada.

55. A French version of the portions of the Constitution of Canada referred to in the schedule shall be prepared by the Minister of Justice of Canada as expeditiously as possible and, when any portion thereof sufficient to warrant action being taken has been so prepared, it shall be put forward for enactment by proclamation issued by the Governor General under the Great Seal of Canada pursuant to the procedure then applicable to an amendment of the same provisions of the Constitution of Canada.

56. Where any portion of the Constitution of Canada has been or is enacted in English and French or where a French version of any portion of the Constitution is enacted pursuant to section 55, the English and French versions of that portion of the Constitution are equally authoritative.

57. The English and French versions of this act are equally authoritative.

58. Subject to section 59, this Act shall come into force on a day to be fixed by proclamation issued by the Queen or the Governor General under the Great Seal of Canada.

59. (1) Paragraph 23(1)(a) shall come into force in respect of Quebec on a day to be fixed by proclamation issued by the Queen or the Governor General under the Great Seal of Canada.

(2) A proclamation under subsection (1) shall be issued only where authorized by the legislative assembly or government of Quebec.

(3) This section may be repealed on the day paragraph 23(1)(a) comes into force in respect of Quebec and this Act amended and renumbered, consequentially upon the repeal of this section, by proclamation issued by the Queen or the Governor General under the Great Seal of Canada.

60. This Act may be cited as the *Constitution Act, 1982*, and the Constitution Acts 1867 to 1975 (No. 2) and this Act may be cited together as the *Constitution Acts, 1867 to 1982*.



# INDEX

	Page		Page
Abortions, therapeutic	107	-pollution, control of	392-3
Accidents	87, 99, 104-6	-services, commercial	413, 420-1
Accommodation, traveller	536-7, 551-3	--summary statistics of	420-1
Acid rain research	268-9	-traffic	412-3, 420-1
Actors and directors	471, 488	--control	412
Acts, federal	787-93	-transport, civil	411-3
Adult offenders and convictions	651, 654-5, 661, 662	Aircraft landing areas	412-3, 420
Aeronautical navigation, radio aids to	409-10, 412	Airports	412, 413, 420
-research	451	Alberta, admission to Confederation	630
Africa, Commonwealth	687	-agricultural produce, index numbers of	322
-Canada and	693-4	--education	307
Aged, services for	201-2, 202-3, 206, 208, 209-10, 211-2, 214-5	-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
Agreements for Recreation and Conservation (ARC)	19	--family	203, 216-7
Agricultural co-operatives	305-6	--mothers	222
-economic and social change	292-3	-area	23
-education	306-7	-arts, aid to	476
-production	298-300, 309-22	-capital and repair expenditures	254
-Products Board	304, 759	-children's benefits	208
--Co-operative Marketing Act	305	-coal resources	371
marketing	296, 305-6	-co-operative associations	556
--prices	322	-courts	643-4
-research	292-3, 301, 305, 393	-diseases, notifiable	88, 100
-resources	293-6	-earnings, average in industry	180-2
-Stabilization Board	304, 759	-economic geography	9
-statistics	296-7, 308-26	-electric energy	374
Agriculture	291-330	-employment, index numbers of	179-80
-Dept. of, acts administered by	301-4, 305, 759	-farm income	308, 309
--functions of	393, 759	-field crops	309-11
-censuses 1976 and 1981	296-7, 326-9	-fisheries administration	269
-federal government services	301-4, 305-6	-fishery products	281
-field crops, production and values	298-9, 309-11	-forest resources	275-7
-provincial government services	305	-forestry program	267
-technological change	292	-fur production	285, 286
-trends in the decade	297-301	-government	615, 856
Air agreements, international	411	--debt	730
-Canada	412, 759	--insurance	572
-Force—see Canadian Forces.		--revenue and expenditure	732-3
-Lines Ltd., Canadian Pacific (CP Air)	412	-health services	88-95
--foreign	411, 412	-hospitals	95, 103, 112
--regional	411-2	immigrants to	75
		-judicial convictions—see Criminal.	
		-labour legislation	159-60, 162-3
		-lakes, principal	24
		-libraries	492-3

	Page		Page
-lieutenant governor	615	Atmospheric environment service	17, 768
-manufacturing, assistance to	512-3	Atomic Energy Agency, International	675
--highlights	505	--of Canada Ltd.	760
-mineral production—see Mineral industry and Minerals.		--Control Board	760
-mining statistics	337-8	-research	393
-motor vehicles registered	425-6	Auditor General, Office of the	717, 760
-mountains and other heights	23	Automobile laws and regulations	410
-municipalities	630-2	-registrations	410, 414-5, 425-6
-old age security	201-2, 202-3, 209-10, 214-5	-sales	534-5, 548
-parks and sites	18, 19, 20, 28-9, 31	Aviation, civil, administration and policy	412
-population—see Population.		--ground facilities	412-3, 420
-regional geography	7-8	--radio aids to	412
-representation in the House of Commons	620, 624, 628		
--in the Senate	610, 620, 850	Balance of international payments	754-5
-Research Council, the	396-7	Bank of Canada	563-6, 573, 574, 760
-roads and streets	424-5	--assets and liabilities	573, 574
-schools—see Education.		--notes	566, 573
-Treasury Branches	567	--reserves	575
-unemployment insurance benefits	158, 168, 189-91	-deposits	574
-vital statistics	43-6, 66-8, 72	Banking	563-8, 573-9
-wildlife management	273	-finance and insurance	563-97
-worker compensation	163, 168, 188-9	Bankruptcies and insolvencies	569-70, 583-7, 894
Alcoholic beverages, control and sale of	539, 557-8	Bankruptcy Act	569-70, 587
--taxes on	716-7, 729	Banks, chartered	566-7, 574, 575-9
Alcoholism and treatment services for	87-8, 110, 111	--assets and liabilities	576-7
Allowances, blind and disabled persons	202, 205, 208-9, 210, 222	--branches	578-9
-family	203, 216-7	--cheque payments	567, 581
-mothers	222	--deposits	574, 576-7
-veterans	205-6, 218-9, 222	--financial statistics	575-7
American Federation of Labor	163, 176	--legislation	566
Anik	445, 451	--loans	576
Anti-dumping Act	693	--notes held by	574
--Tribunal	759-60	Barley, acreage, production and value	310, 311-3, 314
Appeals in criminal cases	644	-farm income from	308
Apples	319	-prices	322
Architects, offices of	537	-shipments	312-3
Archives of Canada, Public	479-80, 779	-stocks	312
Area of Canada and provinces	5-8, 23	-supply and disposition	313
Army—see Canadian Forces.		Beaver pelts, number and value	285
-Benevolent Fund Board	760	Beef consumption	324, 325-6
Art schools and galleries	476-7, 490	Bilingualism	612-3
Arts, performing	471-5, 487	Birds, protection of	272-4
-provincial aid to	475-6	Birthplaces of population	42, 61
Asbestos production and value	343	Births	44, 66-8
-shipments	355	Blind persons allowances	206, 222
Assistance programs, Canadian		--education	128
development	683-5	Blue Water Bridge Authority	760
Assisted Rental Program (ARP)	232	Board of Examiners for Canada Lands	
		Surveyors	760
		Book publishing	478-9, 490-2

	Page
-readers	479
Books about Canada	823-42
Boundaries of Canada	5
Bridges, construction expenditures	256
British Columbia, admission to	
Confederation	630
-agricultural produce, index numbers of	322
--education	307
-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
--family	203, 216
--mothers	222
-area	23
-arts, aid to	476
-capital and repair expenditures	254
-children's benefits	208
-coal resources	371
-co-operative associations	556
-courts	643-4
-diseases, notifiable	88, 100
-earnings, average in industry	180-2
-economic geography	9
-electric energy	374
-employment, index numbers of	179-80
-farm income	308, 309
-field crops	309-11
-fisheries administration	269-70
-fishery products	281
-forest resources	275-7
-forestry program	267
-fur production	285, 286
-government	615, 856-7
--debt	730
--revenue and expenditure	732-3
-health services	88-95
-hospitals	95, 103, 112
-Hydro	374
-immigrants to	75
-judicial convictions—see Criminal.	
-labour legislation	159-60, 162-3
-lakes, principal	24
-libraries	492-3
-lieutenant governor	615
-manufacturing industry, assistance to	513
--highlights	505
-mineral production—see Mineral industry and Minerals.	
-mining statistics	338
-motor vehicles registered	425-6
-mountains and other heights	23
-municipalities	630-2
-old age security	201-2, 202-3, 209-10, 214-5
-parks and sites	18, 19, 20, 28, 31
-population—see Population.	

	Page
-regional geography	8
-representation in the House of Commons	620, 624, 628
--in the Senate	610, 620, 850
-Research	397
-roads and streets	424-5
-schools—see Education.	
-unemployment insurance benefits	158, 168, 189-91
-vital statistics	43-6, 66-8, 72
-wildlife management	273
-worker compensation	163, 168, 188-9
British North America Act	603, 614, 642
Broadcasting, international agreements	450, 452-3
-radio and television	448-50, 452-3, 461-2
Buckwheat, acreage, production and value	310
Budget, federal government	714
Building permits issued	238, 250-2
Bullion and coinage issued	566, 575
Bureau of Pensions Advocates	760
Business and commercial education	133, 142-3
-failures	569-70, 584-7
-taxes	816
Butter production and consumption	300, 317-8
CP Air	412
-Rail	413, 414
Cabinet committee system	607-8
-federal	603-4, 607, 847-52
Cable, communication by	443, 448-50, 462
-television	450, 452-3, 462
Cadet movement in Canada	134
Cadmium	342
Canada and Africa	677
-and the Asian and Pacific Region	677
-and the Caribbean	686
-and the Commonwealth	670, 672
-and disarmament	674
-and Europe	676-7
-and the Far East	677
-and "la Francophonie"	672
-and Latin America	676
-and the Middle East	677
-and the North Atlantic Treaty Organization and NORAD	685-7
-and the Organization for Economic Co-operation and Development	672
-and the United Nations	672, 674-5, 704
-and the United States	676
-area of	5, 23
-Assistance Plan	202, 206, 211, 219-20, 222

	Page		Page
-constitution of	861-7	-Human Rights Commission	642, 763
-converts to the metric system	vii	-Industrial Renewal Board	507
-Council	473-5, 760-1	-International Development Agency	
-Deposit Insurance Corp.	571, 761	(CIDA)	683-4, 763
-Development Corp.	507-8, 761	---Board	763
-Employment and Immigration Advisory		Grains Institute	303
Council	761	-inventory of historic building	19
-Employment and Immigration		-Judicial Council	647
Commission	158, 761	-Labour Congress	163
-Grains Council	303	-Livestock Feed Board	304, 763
-Health Survey	85, 86-7, 95	-military colleges	128
-Labour Code	157, 158-9	-National Railways	413, 414, 763-4
--Relations Board	157, 159, 761	-Patents and Development Ltd.	764
-Mortgage and Housing Corp.	232, 233-5,	-peacekeeping operations	687
	240, 761-2	-Penitentiary Service	764
--renewal plan (CMRP)	233	-Pension Commission	764
-Museums Construction Corp. Inc.	762	-Permanent Committee on Geographical	
-Pension Plan 201-2, 203, 208-9, 211, 212,		Names	764
	220, 222	-postal service	453-4
-Ports Corp.	762	-Press	454
-Post	453-4, 762	-Radio-television and Telecommunications	
-rental supply plan (CRSP)	234	Commission	449, 452-3, 764
-Shipping Act	417	-representation abroad	817-20
-Year Book special articles	843-5	-Saltfish Corp.	764-5
Canada's international status	679-95, 689, 704	-Shield	6, 7, 11, 12
--investment position	754-5	-shipping registry	417
-National capital region	20	-Telecommunications Carriers	
Canadian Advisory Council on the Status of		Association	444
Women	762	-Transport Commission	409-10, 411, 765
-Arsenals Ltd.	762	-Wheat Board	302-3, 308, 765
-Broadcasting Corp.	449-50, 762	-Wildlife Service	272-3
---facilities and coverage	449-50	Canagrex	303, 765
---finance	461-2	Cancer, control and incidence of	86, 87, 99,
---international activities	450		100-2
---programming	449-50	Cape Breton Development Corp.	765
Cancer Society	93	Capital expenditures on construction and on	
-Centre for Justice Statistics	655-6	machinery and equipment	238, 252-4
--for Occupational Health and Safety	762	-investments, foreign	746
-Charter of Rights and Freedoms	642	Cargoes, water-borne	435-7
Coast Guard	410, 418	Caribbean, Commonwealth, Canada and	
-Commercial Corp.	762	the	686
-Constitution	630, 641-2	Casualty insurance	571, 592-3
-content regulations	452-3	Cement production and consumption	344,
-Dairy Commission	305-6, 762-3		351, 352, 356
-development assistance programs	683-5	Census 1981 (see also Population)	37-43, 48,
-forces, command structure of	685-7, 705		51, 54-5, 59-61
--training	686, 687	-of housing	235-6
-forestry service	265, 392-3	Cereals, consumption	323
-General Standards Board	763	Charitable organizations	537
-Grain Commission	301, 302, 763	Chartered banks—see Banks, chartered.	
-Home Insulation Program (CHIP)	235, 365	Cheese production and consumption	300,
-home-ownership stimulation plan			317-8, 324
(CHOSP)	234	Chemicals and chemical products, exports	707
-honours	605-6, 805-15		

	Page		Page
---imports _____	704	Common law and le droit civil _____	641
---industries, activity of _____	515, 518-9, 522-5	Communications _____	443-64
Cheque payments _____	567, 581	-by cable _____	443, 452-3, 462
Chief Electoral Officer, Office of the _____	765-6	-by satellite _____	443, 444-5, 448
-Justice of Canada _____	644, 646	-computer _____	443, 447-8
Child welfare services _____	202, 208, 222	-data services _____	447-8
Chronology June 1980 - May 1984, _____		-Dept. of _____	448, 449, 450-2, 766
Economic _____	795-803	-federal regulations and services _____	450-3
Cigarettes, sales of _____	321	-overseas services _____	448
-and tobacco, production, sales, excise taxes _____		-policy _____	450-1
and duties _____	320-1, 716-7, 729	-record _____	446-70
Cities, building permits in _____	251	-research _____	451-2
-housing development in _____	241	-revolution _____	443
-population _____	38-9, 53-5	-space _____	451
-wage rates _____	180	-spectrum management _____	452
Citizenship, Canadian _____	49-50	-videotex _____	447-8
--Act _____	49-50	-vocal, telephony _____	445-60
--certificates issued _____	50	Community colleges _____	132
--loss of _____	49	Compensation, worker _____	163, 168, 188-9
-of immigrant arrivals _____	48	Computer service industry _____	537, 558
Civil defence _____	687-8	Computer-controlled transmission systems _____	447
-law _____	641-2	Confederation, provincial admissions to _____	630
Civilian labour force _____	165-6, 172	Conservation of fisheries _____	268-70
-War Pensions and Allowances Act _____	784	-of forests _____	265-7
Clay products production and shipments _____	343, 351, 352, 357	-of land and water _____	20-1
Clearing centre transactions _____	788	-of wildlife _____	272-4
Climate _____	16-7, 27-8	Constituencies, redistribution of _____	
Clothing industries, activity of _____	515, 518, 522-5	parliamentary _____	611, 620
CNCP Telecommunications _____	444, 446-7	Constitution _____	861-7
Coal, exports and imports _____	370-1, 693, 696	-Act, the _____	603, 606, 608, 642
-and petroleum products industries _____	515, 518, 522-5	-Canadian _____	603
-production _____	336, 351, 352, 380	Construction, building _____	237-9, 254-5, 741
-supply and demand _____	380	--permits _____	238, 250-2
Coastal waters _____	12-3	-capital and repair expenditures on _____	238, 252-4
Coastline, length of _____	12, 26	-of dwelling units _____	231, 240-1
Coastwise shipping _____	435-7	-of educational buildings _____	255
Cobalt production and shipments _____	342, 350, 351	-electric power _____	256
Cod landings and marketing _____	280-3	-employment _____	167, 179
Coinage and bullion issued _____	566, 575	-engineering _____	255-6
Collective agreements, labour _____	163, 165, 176-7	-government aid to housing _____	231-5
Colleges—see Education.		-of highways, roads and streets _____	255
Columbia River Treaty Permanent Engineering _____		-of hospitals _____	255
Board _____	766	-industry, earnings _____	167, 181
Columbium and tantalum _____	342, 350, 351	-machinery and equipment, capital and _____	
Commerce—see Trade.		repair expenditures _____	238, 252-4
Commercial construction _____	255	-pipeline _____	256
-services, capital expenditures for _____	253	-railway _____	256
Commissioner of Official Languages _____	766	-in urban centres, proposed _____	251
Commissions of inquiry _____	859-60	-work performed, value of _____	237-8, 249-51, 255-6
Commodities, principal, exported and _____		Consumer and Corporate Affairs, Dept. _____	
imported _____	693-8	of _____	508-9, 766
		-goods, regulations re sale of _____	509
		-price index _____	741, 744-5, 753

	Page		Page
Consumption of food	323-5	Dairy Commission, Canadian	305-6, 762-3
Continental shelf	12-6	-production and consumption	300, 316-8
Contingent liabilities	724-5	-products, farm income from	308-9
Convictions of adults	651, 654-5, 661, 662	industry	527
-appeals against	644	Day care	210
Co-operatives	539-40, 555-6	Daylight saving time	17-8
Copper production and value	338, 350, 351, 352-3	Deaf and blind, education for	128
Copyright Appeal Board	766	Death benefits	205, 206, 208
Corporation income taxes	715-6, 719, 728	Deaths	44-5, 66-7, 98-9, 100-2
-taxable income	728	-by age and sex	45, 99
Correctional institutions	652, 654, 662	-by cause	86-8, 100-2
-Investigator	766	-infant	85, 98-9
-Service of Canada	652, 766	Debt, federal, direct and indirect	711, 712, 726
Court Martial Appeal Court	767	--gross bonded	724
Courts, federal	643-4, 646	-national	715, 726
-persons charged and convicted by	654-5, 657, 661	--net	726
-provincial and territorial	646-7	-local	734
Credit unions	567-8, 579-80	-provincial	730
Crime and delinquency	649, 651-2, 654-5	Defence Construction (1951) Ltd.	767
Criminal code and amendments	642-3	-liaison in other countries	685
-law	642-3	Delinquency, juvenile	651-2, 660
-statistics	649, 654-5, 657-9, 660-3	Demography	37-80
--adults convicted of indictable offences	651, 654-5, 661, 662	-households and families	42-3, 62-5
--appeals	644	-migration	48-9, 77-9
--convictions for summary conviction offences	651, 658	-population	37-40, 51-60, 61-2
--correctional institutions	652, 654, 662	-social characteristics	40-2, 58-62
--disposition of cases	661	-vital statistics	43-6, 66-73
--juvenile delinquents	651-2, 660	Density of population	39, 55
--parole system	652, 654	Dental health services, public	89, 91
--provincial and federal corrections	652, 654-5, 662	Dentists	94, 115
--sentences	652, 662	Departments, federal (see also individual departments)	759-85
--uniform crime reporting	658	Diplomatic and consular representation	669-70, 817-22
Crop Insurance Act	304	Director of Soldier Settlement and Director of the Veterans' Land Act	767
Crops, field, production and values	298-9, 309-11	Disability pensions	205, 208
Crown Assets Disposal Corp.	767	Disabled persons allowances	205, 206, 208, 222
-corporations	613-4	--services	202, 210
-forests	263-7, 275	Disease control	88, 91, 93
Cultural activities and leisure	469-97	Diseases, notifiable	88, 100
-changes in growth	469	Divorces	45-6, 66-7, 72-3
-statistics program	469-71	Dollar, price of US in Canada	750
Currency	566, 574-5	Domestic security	391-2, 393-4
Custodial services	652	Drainage basins	11-2
Customs duties, revenue from	722	Drugs, control of	91
--system of	717	Duties, customs and excise	716-7, 721, 729
tariffs	682-3	Duty counsel	648-9
		Dwelling units constructed	231, 240-1
		--loans for	232-5
		-Census and survey data	235-7

	Page		Page
Earnings, average weekly and hourly in		--right to vote	611
industry	167, 179-81	--voters on lists and votes polled at	620-9
-in manufacturing	167, 181, 516, 526	-provincial	614-5
Earth physics, research	346-7	--right to vote	614
Eastern Provincial Airways (1963) Ltd.	412	-Yukon and Northwest Territories	615
Economic Chronology, June 1980 - May		Electoral districts	620-9
1984	795-803	-officer, chief	765-6
-Council of Canada	767	Electric energy generated, by type of	
-and Regional Development, Ministry of State		fuel	382-3
for	767	--exports and imports	376-7
-growth	847-8	--regional activities	374
Education	125-51	--supply and demand	367, 381
-administration and organization	125-36	--consumption	373, 381
-agricultural	306-7	--development	373
-arts, provincial aid to	475-6	--capacity, installed	373, 385
-for blind and deaf	128	--hydro, generation	373
-business and commercial	133, 142-3	--nuclear, generation	373
-community colleges	132	--statistics	373-4
-continuing	134	--thermal, generation	373, 381-2
-elementary and secondary	126, 128	--utilization	373
-enrolments	125-6, 130, 132, 134, 137-9	Electrical products industries, activity	
-expenditures	125, 126, 128, 130, 144-51	of	515, 518, 522-5
-federal involvement	128, 134-6	-engineering, research	392
-financing of	128, 130	Electronic systems, telecommunications	443-8
-grants for	129	Emergency planning	687-8
-history	129-30, 132, 133, 134	-welfare services	202
-Indians	128	Emigration	48, 76
-international activities	674	Employment, analysis of	158-63, 165-6
-Inuit	128	-and Immigration Commission, Canada	46, 158, 761
-library services	479-80	--Dept. of	767
-museums	476-8	-and incomes	157-95
-nursing	132	-by industrial group	166, 179
-postsecondary non-university	133-4	-by occupational group	166, 174
-private schools	128	by province	166, 173
-provincial and territorial systems	126	-by sex	173
-school construction	255	-Census 1981, data	166
-special	92, 128	-centres	158
-statistics	125, 126, 128-30, 132	-earnings and hours	167, 179-82
-teachers, training and staffs	125, 130, 132	-government	611-3, 632-5
-textbooks	478-9	-index numbers of	167, 179-80
-trade and technical	133-4	-injuries	168, 188-9
-universities, administration of	129-30	-legislation—see Labour legislation.	
--research	396	Energy	363-86
--scholarships and fellowships	136, 473-4	-developments	363-7
Educational, Scientific and Cultural Organization,		-international scene	363
United Nations	475, 674	-Mines and Resources, Dept. of	13, 346-7, 365, 372, 393, 767-8
Effects of inflation	742, 744	-resources	363-4
Eggs, consumption	300, 324	-supply and demand	367, 375-6, 378-9, 380, 381
-farm income from	308	Engineering construction	255-6
-production, utilization and value	300, 320	-and scientific services	537
Eldor Resources Ltd.	767	Environment	20-1
Eldorado Nuclear Ltd.	767		
-Resources Ltd.	767		
Elections, federal, dates of	619		

	Page		Page
-Dept. of the _____	20-1, 264-5, 272, 392-3, 768	-planning program _____	210
Environmental programs, federal-provincial _____	21	-spending _____	170-1, 194-5
-assessment and review process _____	21	-violence _____	212-3
--health _____	91	Farm assistance programs _____	303-5
Eskimos—see Inuit.		-Credit Corp. _____	304, 769
Estate taxes _____	716	-expenses _____	300-1
Estimates of population _____	38, 53	-implement and equipment sales _____	328, 555
Ethnic groups _____	41-2, 59-60	-Improvement Loans Act _____	303
-serials project _____	455	-income _____	298-300, 308-9
Europe, Canada and _____	676-7	-prices, index numbers _____	322
European Economic Community, trade _____	698-9, 701	-products, control of marketing _____	305-6
Exchange, foreign _____	742	Farmers, income to _____	309
Excise duties and taxes, revenue from _____	716, 721-2, 729	Farms, 1976 and 1981 censuses _____	296-7, 326-9
---system of _____	716-7	Federal Business Development Bank, the _____	543-4, 567, 574, 769
Executive, federal government _____	605-10, 847-52	-Court of Canada _____	644, 646
Expenditure, consumer _____	742, 744, 745-6	-elections _____	620-9
-family _____	170-1, 194-5	-Environmental Assessment Review Office _____	769
-gross national _____	741, 749	-franchise _____	611
-personal _____	751	-government administration _____	611-4
Expenditures, capital and repairs _____	238, 252-4	--agreements and programs with provinces—see Federal-provincial.	
-consolidated government _____	711, 721	--aids to and control of trade _____	508-9
-federal _____	211, 391, 723	---to housing _____	232-5, 238
local _____	734	---to manufacturing _____	506-9
-provincial _____	733	---to navigation _____	410-1
Experimental farms, federal _____	301	---to railways _____	409
Expo 86 _____	419	--budget _____	714
Export controls _____	681-2	--Cabinet _____	603-4, 607-8, 847-9
-Development Corp. _____	680, 681-2, 768	--debt of _____	711, 726
Exports by commodity and geographic region _____	689, 690-2, 696-8, 701-2	--departments and boards (see also individual departments) _____	759-85
-of fish _____	279-80, 690, 696	--employment _____	611-2, 632-5
-of furs _____	286, 696	--estimates and appropriations _____	713-4
-of livestock _____	696	--executive, the _____	605-10, 847-52
-of manufactured goods _____	503-4	--expenditures _____	95-6, 117-9, 125, 128, 130, 144-51, 391, 398-402, 469, 711, 723
-of newspaper _____	279, 697	--health services _____	88-94
-of wheat _____	690, 696	--hospital insurance _____	89-90
-of wood products _____	690, 696	--hospitals _____	95, 103-6, 107-12
-percentage distribution of _____	691	--insurance _____	571
-to Commonwealth countries _____	691, 701-3	--judiciary, the _____	611, 644, 646
-total value of _____	689	--legislature, the _____	603-4, 608, 610-1, 620, 847-50
External Affairs, Dept. of _____	669-70, 769	--organization _____	603-11, 619-29, 847-52
-aid programs—see Development assistance.		--in relation to agriculture _____	301-4
-relations _____	669-85	---to fisheries _____	268-70
--trade and defence _____	669-705	---to forestry _____	265-7
-trade—see International trade.		--to labour _____	157-9
		---to transportation _____	410
Fair wages policy _____	160	- revenues _____	711, 722
Families and households _____	42-3, 62-5	--surveying and mapping _____	13
Family allowances _____	203, 216-7, 222	--taxation, system of _____	715-7, 726-9
-incomes _____	169-70, 191-2		

	Page		Page
--telecommunications services	450-3	-exports	690, 696
-Identity Program	614	-imports	689-90, 693
-legislation	787-93	-inspection program	90
-Parliament	603-11, 619, 847-9	Foreign Claims Commission	770
--sessions of	610, 619	-Investment Review Agency	770
Federal-provincial aspects of international		-representation in Canada	820-2
relations	669-70	-trade	678-83, 689-703
--environmental programs	20-1	--federal services	680-1
--fiscal arrangements	717-8	--offices abroad	681
--fisheries programs	268-70	--statistics	678-80, 689-703
--housing activities	231-2	Forest administration	265-7
Relations Office	769	-depletion	264-5, 275
--tax collection agreements	718	-fire protection	265-7
Females, convictions of	654, 662	-statistics	275
-deaths of	86, 99	-industries	267-8, 276-9
-in labour force	166, 172-3	-inventories	264, 275
-in population	40, 56-7	-land	263, 275
-life expectancy of	85, 87, 97	-products, exports	263, 276-9, 690, 696-7
Ferries	418	-regions	263-4
Fertility rates	44, 67-8	-resources	263-4
Fibre optics	443, 444, 451	-utilization	275
Film agencies, federal	480-2	Forestry	263-8, 275-9
-Board, National	480-1, 775-6	-employment, wages and salaries	167, 174, 179, 181
Films	481-2, 493-4	-federal programs	265
Finance, Dept. of	769-70	Forests, fish and furs	263-86
Financial operations and control,		Fox pelts, number and value	271, 285, 286
federal	713-7	Franchise, federal	611, 620-9
-institutions	568-9, 581-3	-provincial	614
Fire losses	571, 594-7	Franchising	537, 558
Fires, forest	264-5, 275	Francophone Africa assistance program	677
--protection from	264-5	La Francophonie, Canada and	672
Fish consumption	324	Fraternal societies, insurance	570-1
-exports and imports	279-80, 689-90	Freight traffic, railway	414, 422-3
-landings and marketing	280-3	--water	417-8, 435-8
Fisheries	268-70, 279-84	Freshwater area of Canada	10-2, 23
-federal government activities	268-9	-Fish Marketing Corp.	770
-federal-provincial programs	268-70	Fruit consumption	323-4
-inland	282-3	-exports and imports	689, 693, 696
-international	268	-farm income from	308
-and Oceans, Dept. of	268, 770	-production	319
-persons employed in	269, 284	Fuels, exports and imports	690, 694, 696
-Prices Support Board	770	-heating	236, 245-6
-provincial government activities	268-70	-mining regulations	345-6
-research	268-70	-production	367, 370-2, 373, 375-6, 377, 378, 379, 380
-statistics of	269, 279-84	-sales of motive	427
Fitness and amateur sport	92, 483-4	Fuelwood, production and utilization	275, 276
Flaxseed, acreage, production, stocks, disposition		Fur exports and imports	263, 286, 693, 696
and value	308, 310, 311-3, 315	-farming	270-1, 285
Flour, wheat, production and exports	314	-industry	263, 270-1, 285-6
Food and Agriculture Organization, The	684	-marketing	271, 285-6
-and beverage industries, activity of	515, 518, 522-5, 537	resource management	272-4
-consumer price index	753	-trapping	270
-consumption	323-5		

	Page		Page
Furniture and fixture industries, activity of _____	515, 518, 522-5	Haddock landings and marketing _____	280, 281, 283, 284
Gasoline sales _____	427	Halibut landings and marketing _____	280, 281, 282, 283
-taxes _____	729	Harbours _____	410, 417-8, 437
Gatineau Park _____	20	-traffic in _____	417
General Agreement on Tariffs and Trade _____	683	Hay, production _____	311
Geography _____	5-13, 23-6	Health _____	85-119
Geology _____	13-6	-community _____	91-2
Gold bullion, monetary use _____	575	-dental _____	95
-production, shipments and value _____	336, 340, 350, 351, 354	-environmental _____	91
Government _____	603-35, 847-60	-expenditures, government _____	95-6, 117-9, 723
-of Canada—see Federal government.		-insurance _____	89-90
-finance _____	711-35	-international _____	96
-insurance _____	571-2	-personnel _____	94-5, 114-7
-local (municipal), organization of (see also Local) _____	616-8, 630-2	-protection and care _____	86, 88-9, 90-2
Governments, consolidated revenues and expenditures _____	711-2, 721	-research _____	85, 93-4, 393
-provincial, organization of (see also Provincial) _____	614-5, 852-7	-services _____	95-6
-territorial _____	615-6, 857	--federal _____	88-9, 94-5
Governor General, the _____	603, 604, 605, 606, 607, 610	--international _____	96
Grain, acreages, yields and values _____	309-15	--mental _____	86
-Commission, Canadian _____	302, 763	--provincial and local _____	91-2
-crops of the Prairie provinces _____	311	--rehabilitation and home care _____	91-2, 201, 202, 206, 210
-disposition _____	313	-statistics _____	85-8, 90-2, 94-6
-exports _____	313, 696	-status _____	85
-farm income from _____	308	Heart disease, incidence and research _____	86-7, 99, 100
-lake shipments _____	312-3	Heritage Canada Foundation _____	19, 771
-prices _____	322	-resources _____	18-20
-research _____	301	Herring landings and marketing _____	280, 282, 283
-stocks in storage _____	312	High Commissioners, Canadian _____	817-20
-storage _____	313-4	Highways and roads, distance _____	415
-trade _____	313	--construction _____	424-5
--control of _____	301-3	Historic parks and sites, national _____	19
Grains Group _____	301, 769-70	-Sites and Monuments Board of Canada _____	771
Grants, Canada Council _____	473-5	Holidays, public, legislation _____	160
-for education _____	130, 135	Home entertainment and recreation _____	482-3, 496
Great Lakes _____	6, 10-1, 24	-improvement loans _____	235
Gross national expenditure _____	749, 751	Honey production and value _____	319
--product _____	741	Honours, Canadian _____	605-6, 805-15
Guaranteed income supplement and old age security _____	202-3, 209-10, 211, 214-6, 219, 222	Horticultural crops _____	319-21
Gypsum production value and shipments _____	344, 351, 356	Hospital insurance _____	89-90
		Hospitals, administration _____	88-9
		-admissions _____	102-3
		-allied special, general, tuberculosis _____	102-3, 104-5, 106
		-chronic-extended care _____	108-9
		-construction _____	255
		-for Indians and Inuit _____	89
		-number and bed capacity _____	103
		-nurses, number _____	94, 116

	Page		Page
-patient-days	104	--employment	167, 179-80
-personnel employed	94, 117	--retail prices	753
-psychiatric	109-10	Indian Affairs and Northern Development, Dept. of	128, 613, 615-6, 771
-public, proprietary and federal	107-8	Indians, community and economic development	613
-revenues and expenditures	96, 113-4, 118-9	-education	128
-separations	100-3, 104-6	-health services	89
-services	95	-population	42, 61-2
Hotels, numbers and receipts	536-7, 551-3	-reserves and bands	42, 62
House of Commons, constitution, powers of	603-4, 611, 714	-social services	613
--Members	611, 620-9	Industrial assistance, federal	506-9
Household facilities	237, 246	--provincial	509-13
Households and families	42-3, 62-5	-construction work	254
Housing and construction	231-57	-designs, protection	507, 508-9
-Act, National	232-3, 240, 761	-disputes	158-9, 165, 177-8
-activity, federal	231, 240-1	-failures	569-70
-capital and repair expenditures	238, 253	-legislation	158-63
-community	234-5	-minerals	343-4
-government aid to, federal	232-5, 238	-relations	158-9
-loans	233-5	-research	394, 395
-research	233	-safety legislation	159, 162
Human rights	162, 641-2	Industries—see individual industries.	
Hydroelectric power development	373	Industry group, manufactures classified by	515, 527
--generating capability	373	-research	394, 395
--generation	12, 373	Infant mortality	85, 98
--statistics	373-4	Information Commissioner of Canada, Office of	771
Immigrants, arrivals and destinations	46,	Inland water	10-2, 23, 24-5
	48, 74-5	--use of	12
-origin of	48, 74-5	Insolvencies and bankruptcies	569-70, 583-7
-sex, age and marital status	48, 75-6	Inspection of meats	315
Immigration	46, 48, 74-6	-of steamships	410-1
-Appeal Board	771	-of weights and measures	509
-medical services	89	Inspector General of Banks, Office of	771
Imports by commodity	689-90, 693-6	Institutions, capital and repair expenditures	253
-by geographic region	698-701	Insurance	570-2, 588-93
-by leading countries	698-701	-accident and sickness	571, 588-9, 590-1
-of coal	380, 690, 693	-automobile	571-2, 590-1
-of furs	286, 693	-crop	304
-valuation of	679	-Dept. of	771-2
Income assistance	202-4	-deposit	571
-farm	298-300, 308-9	-government, federal and provincial	571-2
-insurance	206, 208-9, 220	-hospital	89-90, 222
-labour	166-7, 179-82	-life	570-1, 588-90
-national	749	--federal registration	570
-personal	754	--financial statistics	570-1
-tax collections	712, 715-6, 726-7	--fraternal benefit societies	570-1
Incomes, family	169-70, 191-2	--total in Canada	570-1
Index numbers of agricultural prices	322	-property and casualty	571, 590-3
--construction and capital goods	751	-unemployment	168, 189-91,
--consumer prices	741-2, 744-5, 753		201, 202, 206, 207, 209, 222

	Page
Intercensal estimates _____	38-40, 52
Interest on public debt _____	726
Inter-governmental Maritime Consultative Organization _____	674
International activities _____	670-7
-agreements, broadcasting _____	449-50, 452-3
air agreements _____	410
-Atomic Energy Agency _____	675
-Bank for Reconstruction and Development (World Bank) _____	675
-Boundary Commission _____	772
-Civil Aviation Organization _____	410, 674
-Development Association _____	675
--Research Centre _____	684, 772
-Finance Corp. _____	675
-fisheries _____	268
--Commissions _____	772
-health services _____	96
-Joint Commission _____	772
-Labour Organization _____	674
-Monetary Fund _____	675
-research _____	394, 684
-status, Canada's _____	669-70
-Telecommunications Union _____	674
-trade _____	669-70, 678-81
-welfare _____	211
-Year of the Disabled _____	210
Interprovincial and Territorial Boundary Commissions _____	772
Inuit, education _____	128
-population _____	42, 61
Iron ore production and value _____	336, 338, 339, 350, 351, 353
-and products, exports and imports _____	693, 696
Islands _____	13, 26
Jacques Cartier and Champlain Bridges Inc. _____	772
Judges of the Supreme Court _____	644
Judicial statistics—see Criminal. -system _____	641-63
Judiciaries, provincial _____	646
-territorial _____	646-7
Judiciary, federal _____	611, 644, 646
Justice, Dept. of _____	647-9, 772-3
Juvenile delinquents _____	651-2, 660
Knitting mills, activity _____	515, 518, 522-5

	Page
Labour Code, Canada _____	157, 158-9
-collective agreements _____	163, 165, 176-7
-Congress, Canadian _____	163
-Dept. of (Labour Canada) _____	157, 158-9, 163, 164, 167-8, 773
-employment statistics _____	166-8, 172-4
--survey _____	165-6
-force _____	157, 158, 165-6, 172, 174
-government in relation to _____	157-8
-income _____	167
-legislation, federal _____	158-9
--provincial _____	159-63
-Organization, International _____	674
-Relations Board, Canada _____	159, 773
-strikes and lockouts _____	165, 177-8
-unions _____	163, 175-6
-wages and hours, regulation _____	160, 162
-weekly earnings _____	167, 179-80
-working conditions _____	167-8, 183-4
Lakes, Great _____	6, 10-1, 24
-principal _____	24
Land areas of Canada and provinces _____	5, 23
-forest _____	263-4, 275
-use _____	263-4
-and water conservation _____	20-1
Lands, classification, by tenure _____	263, 275
-federal public _____	18
-provincial public _____	19-20, 30-1
Language characteristics of population _____	41-2, 58-9
Languages Act, Official _____	613
Latin America, Canada and _____	676
Law, civil and constitutional _____	641-2
-criminal _____	642-3
-making process, The _____	610
-Reform Commission of Canada _____	643, 773
Laws—see Legislation.	
Lead production and value _____	341, 350, 351
-shipments _____	353
Leather industries, activity _____	515, 518, 522-5
Le droit civil _____	641
Legal services _____	647-9
-aid _____	648-9
-system _____	641-3
Legislation, federal _____	20-1, 787-93
--agriculture _____	301-4
--migratory bird _____	272-4
--mining and petroleum _____	345-6
--passage of _____	610
-safety _____	159, 162, 409-11
Legislature, federal _____	603-4, 608, 610-1, 620, 847-52

	Page		Page
Legislatures, provincial	614-5, 852-7	-agricultural produce, index numbers of	322
-territorial	615-6, 857	--education	307
Liabilities, chartered bank	576-7	-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
-federal government	724-5	--family	203, 216
Libraries, academic and public	479-80, 492-3	--mothers	222
Library of Parliament	773	-area	23
Licences, motor vehicle, registrations and revenue	414-6, 425-9	-arts, assistance to	475
---operators' regulations	410	-capital and repair expenditures	254
-radio and TV stations	452-3	-children's benefits	208
Lieutenant Governors—see individual provinces.		-co-operative associations	556
Life expectancy	85, 97	-courts	643-4
-insurance—see Insurance.		-diseases, notifiable	88, 100
Lime production	351	-earnings, average, in industry	180-2
Liquor, control and sale of	539, 557-8	-economic geography	9
Livestock and crops, farm income from	298-300, 308-9	-electric energy	374
-Feed Board, The Canadian	304, 763	-employment, index numbers	179-80
-marketings	296	-farm income	308, 309
-numbers on farms	300	-field crops	309-11
-and poultry	300, 315-6	-fisheries administration	269
-prices	322	-fishery products	281
-slaughtered	315	-forest resources	275-7
Loans, bank	574, 576, 577	-forestry program	266
-companies, small	583	-fur production	285, 286
-farm	303-4	-government	615, 855
-housing	233-4	--debt	730
-student	135	--revenue and expenditure	732-3
-trust and mortgage companies	568-9, 581-3	-health services	88-95
Lobster landings and marketing	280, 281, 283	-hospitals	93, 103, 108-9, 110-1, 112
Local government debt	734	-immigrants to	75
--expenditure	95-6, 117-9, 734	-labour legislation	159-60, 162-3
--finance	733-4	-lakes, principal	24
--health services	90-2	-libraries	492-3
--organization	616-8	-lieutenant governor	615
--revenue	733	-manufacturing industry, assistance to	512
--tax levies	719-20	--highlights	505
Logging industry	267, 275, 276	-mineral production—see Mineral industry and Minerals.	
Lumber exports and imports	693, 697	-mining statistics	337
-industry	267-8, 276-8	-motor vehicles registered	425-6
		-mountains and other heights	23
		-municipalities	630-2
		-old age security	201-2, 202-3, 209-10, 214-5
		-parks and sites	18, 20, 29, 31
		-population—see Population.	
		-Public Insurance Corp.	571
		-regional geography	6-7
		-representation in the House of Commons	620, 623, 627-8
		--in the Senate	610, 620
		-Research Council	396
		-roads and streets	424-5
		-schools—see Education.	
Machinery and Equipment Advisory Board	773		
--capital expenditures	238, 252-4		
-exports and imports	694-5, 697		
-industries, activity	515, 518-9, 522-5		
Mail services	453-4		
Males, convictions	662		
-deaths	87, 99		
-in labour force	166, 173		
-in population	40, 56-7		
-life expectancy	85, 97		
Manitoba, admission to Confederation	630		

## Page

-unemployment insurance benefits	158, 168, 189-91
-vital statistics	43-6, 66-8, 72
-wildlife management	273
-worker compensation	163, 168, 188-9
Manufactured goods, exports	503-4, 521
Manufactures, annual census of	516
-by industry group	515, 517-9
-by metropolitan area	526
-by province	515, 516-7, 522-5
-in leading industries	527
Manufacturing	503-28
-capital and repair expenditures	252
-establishments, number	516-21, 526-7
-government assistance to	506-13
-industries, activity	503-6, 513-27
--earnings	181, 516, 526
--employment	516-9, 520-1, 526
--goods-producing, value added	867
Maple sugar and syrup	320, 323
Mapping and surveying, federal government	13
Marine construction	255
-navigation, radio aids to	410-1, 418
-services of the federal government	410-1, 418
Marital status of brides and bridegrooms	45, 69-70
--of immigrants	46, 76
--of population	40, 57
Maritime Pollution Claims Fund	773-4
Marketing Act, Agricultural Products	
Co-operative	305
-boards, producer	306
-co-operatives	539-40, 556
-of agricultural products	296, 305-6
-of furs	271, 285-6
Marriages	45, 65, 68-72
Maternity protection	157, 160, 162
Measures and weights, administration of	509
Meat processors and slaughtering industry	527
-supply, distribution and consumption	315-6, 325-6
Medical Care Act	88, 89-90
--programs, provincial and territorial	90-2
--research	85, 90-1, 93-4, 393
--Council	93, 94, 774
-services, federal	88-9
--provincial and local	91-3
--rehabilitation	91-2
Mental health services	86
-hospitals	86, 104-5, 107, 109-11
Merchandising and service industries	533-41, 545-58
-and services	533-58
Merchant Seamen Compensation Board	774

## Page

Metal industries, activity	515, 518-9, 522-5
Metals and metallics—see Minerals.	
Meteorology	13, 15-6, 27-8
Metric conversion	542-3
Metropolitan areas	39, 55
--manufactures by	526
Migration	48-9, 77-9
Migratory birds regulations	272-4
Military colleges	134-5
-forces—see Canadian Forces.	
-liaison abroad	687
Militia	686
Milk consumption	316, 324-5
-marketing controls	296
-production, utilization and farm values	317, 318
Mineral industry, Canada's	335-45, 349-57
--government aid to	345-8
--tax incentives	345
-production, provincial and territorial summary, 1978-82	336-8
--total value	335-6, 349-52
-products industries, non-metallic	515, 518-9, 522-5
Minerals, exports and imports	335-6, 694, 696-7
-fuel production	335, 351, 367, 375-6, 377-8, 379, 380
-industrial	343-4, 355-7
-metallic, production and value	338-43, 349-51, 352-5
-non-metallic, production and value	343-4, 349-50, 351-2, 355-6
-structural materials	344, 349-50, 351-2, 356-7
Mines and minerals	335-57
Minimum wage legislation	160
Mining industry, capital and repair expenditures	252
--employment	174, 179
--wages, average	179, 181
-laws and regulations, federal	345-6
--provincial	346
-research	346-8, 393
Ministers, cabinet	607-8, 847-9
Ministers of provinces	614-5, 852-7
Ministry, federal	603-4, 606-8, 611
-of State for Economic and Regional Development	767
--for Science and Technology	781
Mink pelts, number and value	263, 270-1, 285-6
Molybdenum production and value	342, 350, 351
Money-lenders, licensed	583
Money-orders	453
Money supply	566, 574-5

	Page		Page
Mortgage lending	233, 568-9	---scholarships and grants-in-aid—see Medical Research Council.	
Mother tongue of population	41, 58	-Revenue, Dept. of	777
Mothers allowances	222	-welfare grants program	210-1
Motion picture industry	480-2, 493-4	Native peoples of Canada	42, 61-2, 613
Motive fuels, sales	415, 427	--publications	455, 464
--taxation	711-2, 719	--rights	642
Motor vehicle accidents	87, 99	-communications program	455
--industry	527	Natural gas fields, exploration and development	367-8
--licences and fees	719	--processing and marketing	367
--registrations by province	414-5, 425-6	--production	367, 378
--regulations	410	--reserves	368
--sales	534-5, 548	--supply and demand	378-9
--statistics	425-34	--transportation	368, 370
Motorcycles and mopeds registrations	425-6	-increase of population	44-5, 52, 66-7
Mountains and other heights	5-8, 23-4	-Sciences and Engineering Research Council	777
Municipal government—see Local.		Navigation, aeronautical, radio aids to	412
-police forces	651, 659	--statistics	420-1
Municipalities, number	630-2	--services of federal government	409-10
-proposed construction in selected	251	Nepheline syenite production and value	344, 351, 356
Museums	476-8, 490, 776	New Brunswick, admission to Confederation	630
Musicians and composers	471	-agricultural produce, index numbers of	322
Muskkrat pelts, number and value	285, 286	-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
Mutton and lamb consumption	324, 325	--family	203, 216
National accounts	741-2, 749, 751, 754	--mothers	222
-Advisory Council on Fitness and Amateur Sport	774	-area	23
-Arts Centre Corp.	473, 774	-arts, assistance to	475
-Battlefields Commission	774	-capital and repair expenditures	254
-Capital Commission	20, 774	-children's benefits	208
--region	20	-coal resources	371-2
-Council of Welfare	774	-co-operative associations	556
-defence	685-8	-courts	643-4
--Dept. of, functions of	134, 685-8, 774-5	-diseases, notifiable	88, 100
--liaison in other countries	687	-earnings, average in industry	180-2
-Design Council	775	-economic geography	9
-Emergency Planning Establishment	687-8, 775	-electric energy	374
-Energy Board	370, 775	-employment, index numbers of	179-80
-Farm Products Marketing Council	306, 775	-farm income	308, 309
-Film Board	136, 480-1, 775-6	-field crops	309-11
--productions	493-4	-fisheries administration	270
Gallery of Canada	477	-fishery products	281
Health and Welfare, Dept. of, consultative and technical services	85, 88-9, 92, 96, 776	-forest resources	275-7
-Library of Canada	480, 776	-forestry program	266
--growth	492	-fur production	285, 286
marine parks	18	-government	615, 853-4
-Museums of Canada	136, 476-8, 776	--debt	730
Parole Board	654, 776-7	--revenue and expenditure	732-3
parks and sites	18-9, 28-9	health services	88-95
-product, gross	741	hospitals	95, 103, 112
Research Council of Canada	17, 392, 777	immigrants to	75

	Page
-judicial convictions—see Criminal.	
-labour legislation _____	159-60, 162-3
-libraries _____	492-3
-lieutenant governor _____	615
-manufacturing industry, assistance to _____	510-1
--highlights _____	505
-mineral production—see Mineral industry and Minerals.	
-mining statistics _____	336
-motor vehicles registered _____	425-6
-mountains and other heights _____	23
-municipalities _____	630-2
-old age security _____	201-2, 202-3, 209-10, 214-5
-parks and sites _____	18, 19, 29, 30
-population—see Population.	
-regional geography _____	6
-representation in the House of Commons _____	620, 621, 625, 849-50
--in the Senate _____	610, 620, 849
Research and Productivity Council, the _____	396
-roads and streets _____	424-5
-schools—see Education.	
-unemployment insurance benefits _____	158, 168, 189-91
-vital statistics _____	43-6, 66-8, 72
-wildlife management _____	273
-worker compensation _____	163, 168, 188-9
Newfoundland, admission to Confederation _____	630
-allowances, pensions and services, blind and disabled persons _____	202, 206, 208, 210, 222
--family _____	203, 216
--mothers _____	222
-area _____	23
-arts, assistance to _____	475
-capital and repair expenditures _____	253
-children's benefits _____	208
-co-operative associations _____	556
-courts _____	643-4
-diseases, notifiable _____	88, 100
-earnings, average in industry _____	180-2
-economic geography _____	9
-electric energy _____	374
employment, index numbers of _____	179-80
-farm income _____	308, 309
fisheries administration _____	269
-fishery products _____	281
-forest resources _____	275-7
--program _____	266
-fur production _____	285, 286
government _____	614, 852
--debt _____	730
--revenue and expenditure _____	732-3
-health services _____	88-95
-hospitals _____	95, 103, 111

	Page
-immigrants to _____	75
-labour legislation _____	159-60, 162-3
-lakes, principal _____	24
-libraries _____	492-3
-lieutenant governor _____	614
-manufacturing industry, assistance to _____	509-10
--highlights _____	505
-mineral production—see Mineral industry and Minerals.	
-mining statistics _____	336
-motor vehicles registered _____	425-6
-mountains and other heights _____	23
-municipalities _____	630-2
-old age security _____	201-2, 202-3, 209-10, 214-5
-parks and sites _____	18, 19, 29, 30
-population—see Population.	
-regional geography _____	5
-representation in the House of Commons _____	620, 625
--in the Senate _____	610, 620, 849
-roads and streets _____	424-5
-schools—see Education.	
-unemployment insurance benefits _____	158, 168, 189-91
-vital statistics _____	43-6, 66-8, 72
-wildlife management _____	273
-worker compensation _____	163, 168, 188-9
New Horizons Program _____	201-2, 212
Newspaper readers _____	482
Newspapers, daily, weekly _____	454-5, 463
-revenue from sales _____	454-5
Newspprint production and exports _____	267, 278, 697
Nickel, exports _____	697
-monetary use _____	575
-production _____	340, 350
-shipments _____	353
Non-metallic mineral products industries, activity _____	515, 518-9, 522-5
--production _____	343-4, 349-50, 351
Nordair Ltée-Ltd. _____	412
North American Air Defence Command (NORAD) _____	685, 686
-Atlantic Treaty Organization (NATO), Canada and _____	685, 686
Northern Canada Power Commission _____	777
-Transportation Co. Ltd. _____	777
Northwest Territories, allowances, pensions and services, blind and disabled persons _____	202, 206, 208, 210, 222
--family _____	203, 216
-area _____	23
-capital and repair expenditures _____	254
-courts _____	643-4
-creation of _____	630

	Page		Page
-diseases, notifiable	88, 100	-forest resources	275-7
-economic geography	9	-forestry program	266
-education	128	-fur production	285, 286
-electric energy	374	-government	614-5, 853
-forest resources	275-7	--debt	730
-fur production	285, 286	--revenue and expenditure	732-3
-government	616, 857	-health services	88-95
--debt	730	-hospitals	95, 103, 111
--revenue and expenditure	732-3	-immigrants to	75
-health services	88-95	-judicial convictions—see Criminal.	
-hospitals	95, 103, 112	-labour legislation	159-60, 162-3
-immigrants to	75	-lakes, principal	24
-lakes, principal	24	-libraries	492-3
-libraries	492-3	-lieutenant governor	615
-mineral production—see Mineral industry and Minerals.		-manufacturing industry, assistance to	510
-mining statistics	338	--highlights	505
-motor vehicles registered	425-6	-mineral production—see Mineral industry and Minerals.	
-mountains and other heights	24	-mining statistics	336
-municipalities	630-2	-motor vehicles registered	425-6
-old age security	201-2, 202-3, 209-10, 214-5	-mountains and other heights	23
-parks	18, 19, 29	-municipalities	630-2
-population—see Population.		-old age security	201-2, 202-3, 209-10, 214-5
-regional geography	8	-parks and sites	18, 19, 29, 30
-representation in the House of Commons	620, 624, 629	-population—see Population.	
--in the Senate	610, 620, 850	-regional geography	6
-roads and streets	424-5	-representation in the House of Commons	620, 621, 625
-vital statistics	43-6, 67-8, 72	--in the Senate	610, 620, 849
-wildlife management	274	-Research Foundation Corp., the	396
Notifiable diseases	88, 91, 100	-roads and streets	424-5
Nova Scotia, admission to Confederation	630	-schools—see Education.	
-agricultural produce, index numbers of	322	-unemployment insurance benefits	158, 168, 189-91
--education	306	-vital statistics	43-6, 66-8, 72
-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222	-wildlife management	273
--family	203, 216	-worker compensation	163, 168, 188-9
--mothers	222	Nuclear power production and supply	364, 373
area	23	Nurses	94, 116
arts, assistance to	475	Nursing education	132
-capital and repair expenditures	253	Nutrition and health education	91
children's benefits	208		
coal resources	372		
-co-operative associations	556		
courts	643-4		
diseases, notifiable	88, 100		
earnings, average in industry	180-2		
economic geography	9		
-electric energy	374		
employment, index numbers of	179-80		
-farm income	308, 309		
-field crops	309-11		
fisheries administration	269		
fishery products	281		
		Oats, acreage, production and value	309, 311, 314
		farm income from	308
		-prices	322
		shipments	312-3
		-stocks	312
		supply and disposition	313
		Occupations, wage and salary rates for selected	166-7, 179, 181

## Page

Office of the Auditor General	717, 760
-of the Chief Electoral Officer	765-6
-of the Commissioner for Federal Judicial Affairs	647
-of the Commissioner of Official Languages	766
-of the Co-ordinator Status of Women	782
Official Languages Act	613
-spoken by population	41, 59
Oil fields, exploration and development	367-8, 383
-and gas legislation	346, 365
-processing and marketing	367
production	351, 367, 375, 377
-refining	368
-reserves	368
-substitution	364-5
-transportation	370
Oils and fats, consumption	323
Old age security and guaranteed income supplement	202-3, 209-10, 211, 214-6, 219, 222
Ontario, admission to Confederation	630
-agricultural produce, index numbers of	322
-education	306-7
-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
-family	203, 216
-mothers	222
-area	23
-arts, assistance to	475
-capital and repair expenditures	254
-children's benefits	208
-coal resources	371
-co-operative associations	556
-courts	643-4
diseases, notifiable	88-100
earnings, average in industry	180-2
-economic geography	9
-electric energy	374
-employment, index numbers of	179-80
-farm income	308, 309
field crops	309-11
-fisheries administration	269-70
fishery products	281
-forest resources	275-7
forestry program	266-7
-fur production	285, 286
government	615, 854-5
-debt	730
-revenue and expenditure	732-3
health services	88-95
hospitals	95, 103, 112
-Hydro	374
immigrants to	75
judicial convictions—see Criminal.	

## Page

-labour legislation	159-60, 162-3
-lakes, principal	24
-libraries	492-3
-lieutenant governor	615
-manufacturing industry, assistance to	511-2
-highlights	505
-mineral production—see Mineral industry and Minerals.	
-mining statistics	337
-motor vehicles registered	425-6
-mountains and other heights	23
-municipalities	630-2
-old age security	201-2, 202-3, 209-10, 214-5
-parks and sites	18, 20, 28-9, 30
-population—see Population.	
-Provincial Police	650-1, 659
-regional geography	6
-representation in the House of Commons	620, 622-3, 626-7
-in the Senate	610, 620, 850
-Research Foundation	396
-roads and streets	424-5
-Savings Office	567
-schools—see Education.	
-unemployment insurance benefits	158, 168, 188-9
-vital statistics	43-6, 66-8, 72
-wildlife management	273
-worker compensation	163, 168, 188-9
Optometrists	115
Organization for Economic Co-operation and Development	672
Orphans benefits	206
Pacific Western Airlines Ltd.	412
Paper and allied industries, activity	267-8, 278-9, 515, 518, 522-5
-products, exports and imports	693, 697
-using industries	267-8
Parks Canada	18-9
-federal	18-9, 28-9
-provincial	19-20, 30-1
Parliament, federal	603-11, 619, 847-50
-duration and sessions	610, 619
-Library of	773
Parliamentary representation, redistribution of	611
-secretaries	608
Passport services	670
ParticipAction	484
Patent Appeal Board	777
Patents, administration	508

	Page		Page
and Development Ltd., Canadian	764	-natural increase	44-5, 52, 66-7
Penitentiaries	652, 653	-official languages spoken	41, 59
population	654, 662	-provincial estimates and trends	38, 51, 52
Pension Appeals Board	778	-religious denominations	42, 60-1
Commission, Canadian	764	-sex ratios	40, 56-7
Plan, Canada	201, 202, 208-9, 211, 220, 222	-urban and rural	39-40, 55
--Quebec	201, 202, 208-9, 211, 220, 222	Pork consumption	324, 325
plans	168	Ports	417
-Review Board	778	-Canada	410, 437, 762
Pensions Advocates, Bureau of	760	-vessels and cargoes entered	435-7
for veterans	205-6, 218-9, 222	Postal Union, Universal	674
Personal expenditure	749	Postal service, Canadian, functions of	453-4
Pest control	396	Potash production	343
Petro-Canada	778	-shipments	355
Petroleum—see Oil.		Poultry, farm income from	308
Pharmacists	94, 116	-meat, production and consumption	315-6, 324
Phonograph records and tapes	482-3, 495-6	-number of	300
Physical activity	92	Power—see Electric.	
-setting	5, 31	Prairie Farm Rehabilitation Administration	778
Physicians, numbers	94, 114	-Grain Advance Payments Act	302-3
Pilotage service	411	-provinces, grain production	311
Pipelines, oil and natural gas	368, 370	Precipitation	16-7, 27-8
Placer mining regulations	345-6	Preferential tariff	682-3
Plans for 1988 Winter Olympics	484	Premiers, provincial	852-7
Plastics industries, activity	515, 518, 522-5	Preparatory Commission for Conversion to the Metric System	778
Platinum metals	341-2	Press, Canadian	454
Police forces, organization	649	-statistics	454-5, 463-4
statistics	649-51, 656, 659	Price indexes	744-5, 752-3
Political update	847-57	Primary metal industries, activity	515, 518-9, 522-5
Pollution, control of air and water	20-1, 91	Prime minister, the	603, 604, 606-7, 847
Population, age structure	40, 56-7	-Ministers since Confederation	606-7
births	44, 66-7	Prince Edward Island, admission to Confederation	630
-Census 1981	37-43, 48-9, 51-6, 57-61	-agricultural produce, index numbers of	322
-cities, towns and villages	38, 53-4	-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
country of birth	42, 61	--family	203, 216
deaths	45, 66-7, 86-8, 99, 100-1	--mothers	222
-density	39, 55	-area	23
distribution by areas	38-40, 52-5	capital and repair expenditures	253
emigration	48, 76	children's benefits	208
Eskimos—see Inuit.		co-operative associations	556
estimates	38, 51, 53, 56-7	courts	643-4
ethnic groups	41-2, 59-60	diseases, notifiable	88, 100
growth	37, 51-2	earnings, average in industry	180-2
households and families	42-3, 62-5	economic geography	9
immigrants, statistics	46, 48, 74-6	electric energy	374
Indians	42, 61-2	employment, index numbers of	179-80
infant mortality	85, 98	farm income	308, 309
Inuit (Eskimos)	42, 61	field crops	309-11
language characteristics	41, 58-9	fisheries administration	270
life expectancy	85, 97	fishery products	281
marital status	40, 57		
marriages and divorces	45-6, 66-7, 68-73		
metropolitan areas	39, 55		
migration, internal	48-9, 77-9		

	Page		Page
-forest resources	275-7	-government debt	730
-forestry program	266	--expenditure	96, 118, 733
-fur production	285, 286	--finance	730, 732-3
-government	614, 852-3	--health services	88-95
-debt	730	--insurance	571-2
--revenue and expenditure	732-3	---manufacturing industry	509-13
-health services	88-95	--revenue	732
-hospitals	95, 103, 111	--savings institutions	567-8
-immigrants	75	--tax levies	718-9
-judicial convictions—see Criminal.		-governments, organization, legislatures and	
labour legislation	159-60, 162-3	ministries	852-7
-libraries	492-3	-hospital insurance programs	89-90
-lieutenant governor	614	-judiciaries	646
-manufacturing industry, assistance to	510	-labour legislation	159-60, 162-3
--highlights	505	-lands	19-20, 30-1
-mining statistics	336	-liquor control and sales	539, 557-8
-motor vehicles registered	425-6	-medical care programs	90
-mountains and other heights	23	-parks	19-20, 30-1
-municipalities	630-2	-police forces	650-1, 659
-old age security	201-2, 202-3, 209-10, 214-5	-research	396-7
-parks and sites	18, 19, 30	-roads and streets	424-5
-population—see Population.		-welfare programs	209-10
-regional geography	5-6	Provincial-federal environmental programs	20-1
representation in the House of		--fiscal relations	717-8
Commons	620, 621, 625	--fisheries programs	269-70
-in the Senate	610, 620, 849	--hospital insurance	89-90
-roads and streets	424-5	--tax collection agreements	718
-schools—see Education.		Public Archives of Canada	479-80, 779
-unemployment insurance benefits	158, 168, 189-91	-debt	726
vital statistics	43-6, 66-8, 72	-finance—see individual governments.	
-wildlife management	273	-health services	91-2
-worker compensation	163, 168, 188-9	-libraries	480, 492-3
Printing, publishing and allied industries	515, 518, 522-5	-schools—see Education.	
Privacy Commissioner of Canada	778	-service	611-3
Privy Council, members of Queen's	606, 850-2	--Commission	612-3, 779
-Office	608, 778-9	--Staff Relations Board	779
Production, agricultural	299, 300, 309-10, 314-6, 317-21	-Works, Dept. of	779-80
-electric power	375-6, 381, 382-3	Pulp and paper industry	267, 278-9, 527
-fisheries	280-1, 283-4	-exports	279, 696
forestry	263, 276-7, 278	-production	278-9
-furs	270-1, 285-6	Pulpwood production and utilization	275, 276
-manufacturing	503-4, 516		
-mineral—see Mineral industry and Minerals.		Quarrying regulations	346
Productivity trends, aggregate	751	Quebec, admission to Confederation	630
Provinces, areas	23	-agricultural produce, index numbers of	322
education—see Education.		--education	306
-population	38, 51, 53	-allowances, pensions and services, blind and	
Provincial elections	614-5	disabled persons	202, 206, 208, 210, 222
-electric power developments	373-4	--family	203, 216-7
forests	263-4, 275	--mothers	222
-franchise	614	-area	23
		-arts, assistance to	475



	Page		Page
-federal	391-6	Salaries and wages in industry	167-8, 179-82
-fisheries	268-9	--in manufacturing—see Manufacturing.	
-forestry	263, 265-7, 392, 393	Sales of farm implements and equipment	554-5
-housing	233	-of new motor vehicles	534-5, 548
-industrial	394, 395, 506-9	Salmon landings and marketing	280, 282, 283
-international	394, 672, 674, 683-5	Salt production	351
medical	85, 90-1, 93-4, 391	-shipments	343, 355
-mining	393	Saltfish Corp., Canadian	764-5
-provincial	396-7	Sand and gravel production	344, 351
-radio	451-2	--shipments	357
-space	451	Saskatchewan, admission to Confederation	630
-university	396	-agricultural produce, index numbers of	322
-wildlife	272-4	--education	307
Reserves, Canadian Forces	685-7	-allowances, pensions and services, blind and disabled persons	202, 206, 208, 210, 222
-Indian	42, 62	--family	203, 216
Resources—see individual primary industries.		--mothers	222
Restaurants, receipts	537, 553	-area	23
Restrictive Trade Practices Commission	542, 780	-arts, assistance to	476
Retail trade	533-6, 545-51	-capital and repair expenditures	254
Retirement pensions	208	-children's benefits	208
Revenue Canada Taxation	726	-coal resources	371
-consolidated government	711, 722	-co-operative associations	556
-federal	721-2, 726, 727-9	-courts	643-4
-local	733	-diseases, notifiable	88, 100
-provincial	732	-earnings, average in industry	180-2
Review of the economy	741-56	-economic geography	9
-a glance back at the 1970s	741-2	-electric energy	374
-influence of the 1970s on the early 1980s	742, 744	-employment, index numbers of	179-80
-regional economies	747	-farm income	308, 309
Rivers and tributaries, principal, length	10-2, 25	-field crops	309-11
Road transport	410, 414-6	-fisheries administration	270
Road, highway, street and bridge construction, value	255, 424-5	-fishery products	281
Roosevelt Campobello International Park Commission	780	-forest resources	275-7
Royal Canadian Mint	566, 575, 780	-forestry program	266
--Mounted Police	649-50, 659, 780-1	-fur production	285, 286
-Commissions	859-60	-government	615, 855-6
Rubber and plastics products industries, activity	515, 518, 522-5	--debt	730
Rural population	39-40, 55	--Insurance	571-2
Rye, acreage, production	310, 311	--revenue and expenditure	732-3
-farm income from	308	-health services	88-95
-prices	314, 322	-hospitals	95, 103, 112
-shipments	312-3	-immigrants to	75
-supply and disposition	313	-judicial convictions—see Criminal.	
Safety legislation, industrial	159, 162	-labour legislation	159-60, 162-3
--traffic	410	-lakes, principal	24
St. Lawrence Seaway	417, 418	-libraries	492-3
--Authority	410, 418, 781	-lieutenant governor	615
		-manufacturing industry, assistance to	512
		--highlights	505
		-mineral production—see Mineral industry and Minerals.	
		-mining statistics	337
		-motor vehicles registered	425-6

	Page		Page
mountains and other heights	23	Slaughtering and meat processors industry	527
municipalities	630-2	Small loans companies	583
-old age security	201-2, 202-3, 209-10, 214-5	Smelting and refining industry	527
-parks and sites	18, 20, 29, 31	Social assistance, provincial	210-1
population—see Population.		-Sciences and Humanities Research Council	393-4, 473, 781
-regional geography	7	-security	201-25
-representation in the House of Commons	620, 623-4, 628	Sodium sulphate production and value	351, 352
--in the Senate	610, 620, 850	Soldier Settlement, Director of	767
-Research Council	396	Solicitor General, Dept. of the	781
-roads and streets	424-5	Sovereigns of Canada since Confederation	605
-schools—see Education.		Soybeans, production	310
-unemployment insurance benefits	158, 168, 189-91	Space research	451
-vital statistics	43-6, 66-8, 72	Spirits, excise revenue	729
-wildlife management	273	duties	716-7, 729
-worker compensation	163, 168, 188-9	Sport Canada	483-4
Satellites	443, 445, 447, 448, 451	-programs, federal	92, 483-4
Savings institutions, provincial government	567-8, 579-80	Standard time and time zones	17-8
Sawmill and planing mill industry	267, 276-8, 527	Standards Council of Canada	509, 781
Scholarships and fellowships	136, 396, 473-4	Statistics Canada	391-2, 393, 782
Schools—see Education.		Status of Women, Office of the Co-ordinator	782
Science Council of Canada	781	Steel and iron mills industry	527
-and technology	391-404	Stillbirths	44, 67
-and Technology, Ministry of State for	398, 781	Stockyards, marketing	322
Seal hunt, the	270	Stone production and shipments	344, 351, 357
Seaway International Bridge Corp. Ltd.	781	Stores, retail	533-6, 545-9
Secretary of State of Canada, Dept. of the	49-50, 135, 781	Strikes and lockouts	159, 165, 177-8
Senate, members and representation	610-1, 620, 849-50	Structural materials production	344, 349-50, 351-2, 356-7
Service co-operatives	539-41	Student loans	135
-industries, employment and earnings	167	Students—see Education.	
-trades	536-7, 551-3	Sugar beets, production and value	319
Sessions of Parliament, duration	610, 619	Suicides	86, 99
Sex distribution of immigrants	48, 75	Sulphur production	343-4, 355-6
--of population	40, 56-7	Supply and Services, Dept. of	782
Shingle mill industry	267	Supreme Court of Canada	644
Shipping	417, 435-8	Survey, labour force	165-6
aids to navigation	410-1	Surveying and mapping, federal government	13
entered at Canadian ports	435	Survivors pensions	208
international seaborne	435-8		
registry, Canadian	417	Tariff agreements	682-3
steamship inspection	410-1	-arrangements with Commonwealth countries	683
traffic	417, 438	--with non-Commonwealth countries	682
vessels, registered	437	Board	782-3
water-borne cargo, principal commodities	435-7	Tariffs, revenue from	722
Silver, monetary use	575	and Trade, General Agreement on	682-3
production and value	341, 350, 351	Tax collection agreements, federal-provincial	718
shipments	354	Court of Canada	783
		credits and rebates	203, 209

	Page
-income, collections ____	712, 715-6, 719, 721-2, 726-8
-retail sales _____	716
-revenue—see Revenue.	
Taxation in Canada, system _____	715-20
---federal _____	715-8
---local _____	719-20
---provincial _____	718-9
Teachers, training and staffs _____	130, 132
Technical and trades training _____	133-4
Telecom Canada _____	447
Telecommunications _____	412, 443-8, 457-60
-carriers _____	444
-federal regulations and services _____	450-3
-international services _____	445
-networks _____	444-5
-in the North _____	448
-system _____	443-4
Telefilm Canada _____	481, 783
Teleglobe Canada _____	445, 446, 448, 783
Telegrams and telegraphs _____	445, 461
Telephone statistics _____	445-6, 457-60
-TransCanada System _____	444
Telesat Canada _____	445, 448, 783
Television _____	447, 449-50, 461-2
-cable _____	450, 452-3, 462
-pay _____	453
Telex and TWX _____	446-7
Telidon _____	447-8
Temperatures _____	16-7, 27-8
Territorial governments _____	615-6, 857
-judiciaries _____	646-7
Textile and Clothing Board _____	783
-industries, activity _____	515, 518, 522-5
Textiles, exports and imports _____	690, 696
Theatres _____	482, 494
Thermal power, generation _____	373, 381-3
Timber marks, protection _____	508-9
-volume _____	275
Time zones _____	17-8
Titanium production _____	351
Tobacco, leaf, acreage, production and value _____	320-1
-products industries, activity ____	515, 518, 522-5
taxes _____	729
--revenue _____	721-2
Tourism _____	484, 541
-Canada _____	541
Tourist information _____	484, 541
-trade _____	536-7, 551-3
Towns, population _____	38, 53-4
Trade arrangements with Commonwealth countries _____	683
- with non-Commonwealth countries ____	682

	Page
-balance changes _____	689
-by commodity _____	689-90, 693-8
-by country _____	691, 698-703
-coastwise _____	435-7
-fairs and missions bureau _____	681
-government aids to and control of ____	305-6, 509
--federal services _____	680-5
-marks, administration _____	508
-standards _____	509
-unions _____	163, 165, 175-6
Traffic enforcement statistics _____	649, 658
Training, Canadian Forces _____	134, 685-7
Transport, Dept. of ____	409-10, 415, 417, 783-4
Transportation _____	295-6, 409-38
-equipment industries, activity _____	515, 518-9, 522-5
-government promotion and regulation ____	409-1
Trapping, fur _____	270
Travel, deficit _____	747
-receipts and payments _____	704
Treasury Board _____	611-2, 784
Treaties, trade _____	682-3
Trust and mortgage companies ____	568-9, 581-3
Tuberculosis, incidence _____	88
Umpire, Office of the _____	784
Unemployment insurance ____	158, 168, 189-91, 201, 202, 206, 207, 209, 222
-in labour force _____	165-6, 172, 173
Uniform crime reporting _____	649, 658
Unions, labour _____	163, 165, 175-6
United Kingdom, trade with ____	678-9, 691, 698, 701
-Nations, Canada and _____	672, 674, 704
--children's fund _____	674
--Economic and Social Council _____	672
--Educational, Scientific and Cultural Organization (UNESCO) _____	674
--Food and Agriculture Organizations _____	674
--general assembly _____	672
--Inter-governmental Maritime Consultative Organization ____	674
--International Atomic Energy Agency ____	675
---Bank for Reconstruction and Development (World Bank) _____	675
---Civil Aviation Organization _____	410, 674
---Development Association _____	675
---Finance Corporation _____	675
---Labour Organization _____	674
---Monetary Fund _____	675
---Telecommunications Union _____	674
--specialized agencies _____	672, 674-6

	Page		Page
--Universal Postal Union	674	--minimum and regulation of	160
--World Health Organization	96	-policy, fair	160
---Meteorological Organization	674	-and salaries, average	167, 179-82
United States, Canada and	676	War allowances and pensions, veterans	205-6, 218-9, 222
tariff arrangements with	682	-Veterans Allowance Board	784
-trade with	678-9, 691, 701, 703	--services—see Veterans.	
Universal Postal Union	674	Water area, fresh, of Canada	5-8, 23
Universities—see Education.		-charges	720
Uranium Canada, Ltd.	784	-conservation and development programs	20-1
-production and supply	350, 372-3, 381-2	-pollution, control	20-1, 91
-shipments	355	-power developments	373
Urban centres, births, deaths and marriages	66-7	--generation	373
--population	39, 53-5	-transport	410, 416-8, 435-8
--proposed construction	251	-government aids to	410
-transportation	415-6, 428-9	Waters, coastal	12-3
Utilities, capital, repair and maintenance		-inland	10-2, 23-5
expenditures	253	Weather services	16-7, 21
		Weights and measures, administration	542
Vacation legislation	160	Welfare services, emergency	202
Veal consumption	324, 325	--federal	201, 202-3
Vegetables, acreage and production	319	federal-provincial	203, 205
-consumption	324	--international	211
-exports and imports	689, 693, 696	-provincial	210-1
-farm income from	308	--veterans	201
Vending machine sales	535-6, 549-50	Western grain stabilization administration	303
Veneer and plywood industry	267, 278	Wheat, acreage, production and value	309, 311
Venerale diseases, treatment services	88	-Board, Canadian	296, 298, 302-3, 308, 765
Vessels on Canadian registry	417	-exports	690, 696
-entered at Canadian ports	435	-farm income	308
Veterans Affairs, Dept. of	784	-flour, production and exports	313
-hospitals	205-6	-prices	322
-pensions and allowances	205-6, 218-9, 222	-shipments	312-3
-welfare	201	-stocks, supply and disposition	313
VIA Rail Canada, Inc.	409, 413, 414, 784	Wholesale trade	537, 539, 554
Videotex	447-8	Wildlife	272-4
Villages, towns and cities, population	38, 53-4	Women's Bureau, the	157-8
Visual artists	470, 488	Wood industries, activity	267, 276-8, 515, 518, 522-5
Vital statistics	43-6, 66-73	-products, exports and imports	693, 696-7
births	44-5, 52, 66-7	-pulp exports	279, 697
deaths	45, 52, 66-7, 86-8, 98-9, 100-2	Working conditions in industry	167-8, 183-4
divorces	45-6, 66-7, 72-3	Worker compensation	163, 168, 188-9
infant mortality	85, 98	World Bank	675
-life expectancy	85, 97	-Health Organization	96, 674
marriages	45, 66-7, 68-72	-heritage sites	19
-natural increase	44-5, 52, 66-7	-Meteorological Organization	674
Vocational rehabilitation	91-2	Writers	470-1, 488
Votes polled at federal elections	620-9		
		Youth, Minister of State for	784-5
Wage rates	167, 179-82, 184-6	Yukon Territory, allowances, blind and disabled	
Wages and collective agreements	163, 165, 176-7	persons	222

	Page
--family	216, 222
-area	23
-capital and repair expenditures	254
-courts	643-4
-creation of	630
-diseases, notifiable	88, 100
economic geography	9
-education	128
-electric energy	374
-fishery products	281
-forest resources	275-7
-fur production	285, 286
-government	615-6
--debt	730
--revenue and expenditure	732-3
-health services	88-95
-hospitals	95, 103, 112
-immigrants to	75
-libraries	492-3
-mineral production—see Mineral industry and Minerals.	

	Page
-mining statistics	338
-motor vehicles registered	425-6
-mountains and other heights	23
-municipalities	630-2
-old age security	201-2, 202-3, 209-10, 214-5
-parks and sites	18, 19, 29
-population —see Population.	
-regional geography	8
-representation in the House of Commons	620, 624, 629
--in the Senate	610, 620
-roads and streets	424-5
-vital statistics	43-6, 66, 67-8, 72
-Water Board	785
-wildlife management	273-4
 Zinc production and value	 340-1, 350, 351
-shipments	354









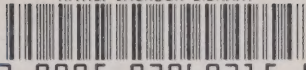








R.W.B. JACKSON LIBRARY



3 0005 03060215 8



